Public Utilities

FORTNIGHTLY

September 12, 1940

PUBLIC UTILITIES REPORTS, INC.
PUBLISHERS

THE STORY OF THE UTILITY BOSS WHO LIKED COFFEE!

Amos Watts, hot tempered president of the North-South Utility Company, was a coffee worshiper—8 or 10 cups was his daily minimum. And heaven help the cook if the coffee wasn't good. (Which happened all too often!)

Mrs. Watts got pretty tired of fireworks for breakfast nine mornings out of ten. Decided they'd have perfect coffee *all* the time, or know the reason why. She found the answer in a shiny new Silex Glass Coffee Maker. And peace reigned serene in the Watts household.

BUT THAT'S NOT THE WHOLE STORY!

Mr. Watts was pretty shrewd. When it came to increasing the load on the lines, Amos Watts' mind was a meter that never stopped turning.

"Good coffee 2 days running—what's happened in this house?" beamed the lord and master. "Bought a Silex," cooed his wife. Automatically Amos Watts' nimble mind began to function.

"Good coffee! That's going to help my business! Any one of those electric Silex models adds a bunch of KWHs to the load. We'll sell 'em the idea of *good* coffee—*electric coffee*—and add plenty of KWHs on the line."

Things sure started in the office that morning!

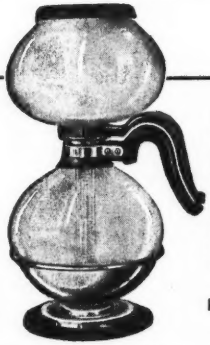
New displays blossomed in the Company's Main St. windows. They were filled with electric Silex Glass Coffee Makers—all the different models, using an average of 87 KWH each a year. Bill enclosures played up coffee... bill posters, newspaper advertisements—the promotion push of the Utility went smack behind *good* coffee—*electric coffee!* Local coffee firms got on the band wagon . . . grocers, too. The whole section got hipped on *good* coffee... and found out the only way to have it *every* time was to make it electrically in a Silex Glass Coffee Maker.

AND Boy—how the load reacted!

MORAL: *Push Silex Electric models. Women know them and like them—and your load is bound to go up.*

• • •

THE "DELRAY." Electric Silex, is but one of many popular models in the Electric Silex line. 8-cup size, black trim, $4.95. 10-cup size, $5.45. It's a good model to feature.



► What can we do to help you tie in Silex Glass Coffee Makers with *your* promotion plans? We have posters, billboard designs, suggested window displays, bill stuffers . . . plenty of good promotional material all keyed together to help you increase your load. Write us . . . *today.*

Pyrex Brand Glass Used Exclusively in Upper Bowl Handles.

Genuine SILEX

GLASS COFFEE MAKER

TRADE MARK REGISTERED U S PAT OFF.

THE SILEX COMPANY . . . HARTFORD, CONNECTICUT

Creators of the Glass Coffee Maker Industry

Editor—HENRY C. SPURR
Associate Editors—ELLSWORTH NICHOLS, FRANCIS X. WELCH, NEIL H. DUFFY
Financial Editor—OWEN ELY

Public Utilities Fortnightly

VOLUME XXVI *September 12, 1940* NUMBER 6

Contents of previous issues of PUBLIC UTILITIES FORTNIGHTLY *can be found by consulting the "Industrial Arts Index" in your library.*

Advertising Section

¶ *This magazine is an open forum for the free expression of opinion concerning public utility regulation and allied topics. It is supported by subscription and advertising revenue; it is not the mouthpiece of any group or faction; it is not under the editorial supervision of, nor does it bear the endorsement of, any organization or association. The editors do not assume responsibility for the opinions expressed by its contributors.*

PUBLIC UTILITIES REPORTS, INC., PUBLISHERS
Publication Office ..... CANDLER BUILDING, BALTIMORE, MD.
Executive, Editorial, and Advertising Offices ..... MUNSEY BUILDING, WASHINGTON, D. C.

PUBLIC UTILITIES FORTNIGHTLY, a magazine dealing with the problems of utility regulation and allied topics, including also decisions of the regulatory commissions and courts, preprinted from *Public Utilities Reports, New Series*, such Reports being supported in part by those conducting public utility service, manufacturers, bankers, accountants, and other users. Entered as second-class matter April 29, 1915, under the Act of March 3, 1879. Entered at the Post Office at Baltimore, Md., Dec. 31, 1936; copyrighted, 1940, by Public Utilities Reports, Inc. Printed in U. S. A.

PRICE, 75 CENTS A COPY ANNUAL SUBSCRIPTION, $15.00

Pages with the Editors

IN all this turmoil over the acceptance speech of Wendell Willkie and the replies and counter replies, one New York magazine was thoughtful enough to send a man around to the offices of Commonwealth & Southern, Willkie's former employer, to see how that holding company system was getting along without its favorite son.

APPARENTLY everybody around 20 Pine street is managing to keep a stiff upper lip, chin up, and all that sort of thing. Indeed, the magazine reporter found business going on pretty much as usual at the old stand. Seven days after Mr. Willkie resigned, Justin R. Whiting was hustled down to Wilmington, Delaware, to a directors' meeting where he was made president of Commonwealth & Southern of Delaware. Then he was hustled back to New York city and elected president of Commonwealth & Southern of New York. After that he was elected chairman of the board of its subsidiary Consumers Power, and made a director of all three corporations mentioned. A congratulatory telegram from Mr. Willkie arrived and that was about all there was to it.

EXPENSES of this inauguration ceremony were very modest indeed. It cost $1.80 to take "Mr. Willkie" off the door of the president's office and substitute "Mr. Whiting." Commonwealth & Southern also had to write off its books a loss of $2 for a bunch of letterheads which will never be any good unless Mr. Willkie should some time in some strange fashion get his old job back again. Then there was an item of $1.15 for some new rubber stamps.

H. W. BLALOCK

It will take years before we can assess the true value of the rural electrification program.

(SEE PAGE 331)

THOMAS L. NORTH

San Francisco thinks the Raker Act results in unwarranted Federal interference.

(SEE PAGE 338)

MR. Whiting made a personal investment to add to the tone of the office. It's a picture of his distinguished predecessor, etched on stainless steel, with a silk banner reading, "From the crossroads of America to the White House."

INCIDENTALLY, Mr. Whiting found this office which he inherited from Mr. Willkie cluttered up with a variety of mementoes which had arrived in recent weeks from well-wishers. There were at least four statues of elephants, a big plaster bust of Benjamin Franklin, a pair of gray suspenders, and a blue necktie with an elephant print on it.

THE careers of Messrs. Whiting and Willkie

"NEW" isn't the word for it!

Special Savings for FLEET OPERATORS

Operating expenses and lay-ups for overhauls can be cut down by systematic use of this new, revolutionary internal engine cleaner. Write or phone any of the offices listed below for complete details.

Cisco Solvent is bringing so many advantages to fleet operators that it must not be called merely new but REVOLUTIONARY. Cisco Solvent permits the internal cleansing of an automotive engine without any of the usual labor expense of tearing the motor down or taking the head off. Cisco Solvent removes dirt, gum, sludge and varnish from the internal moving parts of an engine—and with complete safety. It contains a lubricant which protects all parts during the purging process. Through the application of Cisco Solvent, operators now give their vehicles "wide-awake" engine performance, resulting in reduced operating and maintenance cost. Learn what Cisco Solvent can do for you.

Cities Service Oil Companies

Cities Service Oil Company—Chicago, New York, Cedar Rapids, Boston, St. Paul, Grand Forks, Kansas City, Fort Worth, Oklahoma City, Milwaukee, Cleveland, Detroit, Harrisburg, Syracuse.

Cities Service Oil Company, Ltd.—Toronto, Ontario.

Arkansas Fuel Oil Company—Shreveport, Little Rock, Jackson, Miss., Birmingham, Atlanta, Charlotte, N. C., Nashville, Richmond.

are strangely parallel. Both were middle westerners and Democrats — formerly, at least. Both grew up in small towns and got law degrees from middle western universities. When Willkie became president of Commonwealth & Southern in 1933, Whiting moved into Willkie's old place in the law firm of Weadock and Willkie. Mr. Whiting is a year younger than Willkie and has no political aspirations. "If I fill a job that Willkie did," he said, "I'll figure I'm doing all right."

IT's a well-known military axiom that good communications are the life line of national defense. It is not surprising, therefore, that in the current campaign to make America invincible throughout the western hemisphere, the Army and Navy should pay particular attention to the state of our communications facilities. Of course, this necessarily involves the closest collaboration with telephone and telegraph companies, radio broadcasters, cable and radiogram facilities, and the manufacturers of the same. In the leading article in this issue, HERBERT COREY, veteran Washington observer, gives us an idea of what can be expected along the communications front if war should come to America.

NO matter which way the forthcoming general elections turn out, the city of San Francisco is going to have to do something to make its peace with Secretary of Interior Ickes over the so-called Hetch Hetchy controversy. This much is clearly indicated in recent remarks attributed to Secretary Ickes.

HE wants an understanding about what the city is prepared to do to conform with the Raker Act—a Federal statute which forbids the city from selling power generated at the Hetch Hetchy dam to any private utility. The Supreme Court has sustained the Ickes' contention that the present arrangement between San Francisco and the Pacific Gas and Electric Company violates that statute and the Secretary of Interior is determined to force a showdown, even if he has to get the Army to pull the switches.

THOMAS L. NORTH has written an analysis of this unusual controversy between San Francisco and the Federal government in an article appearing in this issue (beginning page 338). MR. NORTH is a graduate of the University of California (A.B., '31) and Harvard School of Business Administration. For the last three years he has been connected with Standard Statistics Co., Inc., and has been doing field work for that organization on the West coast.

H. B. BLALOCK, whose article on rural electrification also appears in this issue (beginning page 331), is a member of the Arkansas Department of Public Utilities. He is a graduate of the University of Illinois (Ph.D., '31) and prior to his appointment to the Arkansas commission in 1937 was assistant professor of business administration at the University of Arkansas.

HERBERT COREY

Communications industries are being prepared for a call to the colors.

(SEE PAGE 323)

THE American Transit Association is scheduled to hold its annual convention at White Sulphur Springs, W. Va., September 22nd to 26th. The next issue of the FORTNIGHTLY will contain material of special interest to the transit industry. This issue will be out September 26th.

AMONG the important decisions preprinted from *Public Utilities Reports* in the back of this number, may be found the following:

THE Washington commission, in disapproving a proposed telephone rate increase, gives special consideration to questions of depreciation, pension accruals, apportionment, and tax expense. (See page 193.)

ORIGINAL cost, without consideration of reproduction cost, is adopted by the Federal Power Commission as the basis for rates of a federally licensed power project. (See page 236.)

THE Securities and Exchange Commission has denied a motion to vacate an order appointing a trial examiner in integration proceedings. (See page 253.)

The Editors

In This Issue

In Feature Articles

In Financial News

In What Others Think

In the March of Events

In The Latest Utility Rulings

PREPRINTS FROM PUBLIC UTILITIES REPORTS

Various regulatory rulings by courts and commissions reported in full text, pages 193–256, from 34 PUR(NS)

Remarkable Remarks

"There never was in the world two opinions alike."
—MONTAIGNE

HON. ROBERT F. RICH
U. S Representative from Pennsylvania.

"America is in bad shape, and it is getting worse all the time."

ROBERT M. HUTCHINS
President, The University of Chicago.

"We know now that mechanical and technical progress is not identical with civilization."

HON. JENNINGS RANDOLPH
U. S. Representative from West Virginia.

"Civil aviation in this country is today at a peak never before reached in any part of the world."

EDITORIAL STATEMENT
Industrial News Review.

"It would be a tragic mistake if the defense program were to be accompanied by a widespread extension of government bureaus and departments."

HON. J. THORKELSON
U. S. Representative from Montana.

". . . we are now dominated and plagued by various pressure groups that care little or nothing about the United States as long as they can involve us in the present European War."

HON. BURTON K. WHEELER
U. S. Senator from Montana.

"Since when has the British Navy been called upon to protect our shores from attack? When was it that a European power helped us preserve freedom and democracy here in America?"

EDITORIAL STATEMENT
Nation's Business.

"The broadcasting industry and we taxpayers pay rather dearly for the privilege we have of turning a dial and thrilling to some variation of that oft-told tale—what our government at Washington is doing to make up happy."

HON. HENRY F. ASHURST
U. S. Senator from Arizona.

"Alcohol and power are two things that, down through the centuries, have acted upon all races in all climates and on both sexes alike, and the more power an individual gets the more he wants, and enough power is all there is."

HON. CHESTER H. GROSS
U. S. Representative from Pennsylvania.

". . . farm income is the governing factor of our national economy and agriculture is still the basis of our national wealth. A profitable agriculture solves the dual problem of idle acres in the country and idle men in the city."

WENDELL L. WILLKIE
Republican presidential nominee.

"For the old American principle that government is a *liability* to be borne by the citizens for the sake of peace, order, and security, the New Deal has substituted the notion that government is an *asset* without which none of us can survive."

HON. ARTHUR CAPPER
U. S. Senator from Kansas.

"I believe that too heavy a concentration of industry in the already congested centers along the Atlantic coast is not a healthy thing for the nation as a whole, and the same statement applies to concentration carried too far on the Pacific coast."

HON. LISTER HILL
U. S. Senator from Alabama.

"George W. Norris put on his armor. He went forth to battle to properly insure and safeguard the development of water power that the people might enjoy their inheritance; that they might get the benefit of the power that God Almighty had given to them."

EDITORIAL STATEMENT
Broadcasting.

"Never before has the broadcasting industry been given the kind of endorsement and assurance of a 'free radio' as that voted unanimously both by the Republican and Democratic conventions in separate radio planks of their respective party campaign platforms."

HON. DAVID I. WALSH
U. S. Senator from Massachusetts.

"We are living in a world that is in no way the world in which our generation was born. Confusion, doubt, and uncertainty stalk throughout the land. In most parts of the world all spiritual forces are latent, and only the rumblings of gigantic war machines are heard."

HON. WILLIAM B. BANKHEAD
U. S. Representative from Alabama.

"Under our system of party government, it is just and equitable for the electorate to judge and to reward or punish a national party, not upon the basis of its platform promises, but strictly upon the record of its performance and accomplishments as an instrumentality of public service."

PHILIP D. REED
Chairman of the Board, General Electric Company.

". . . the broad concept of government of the people, by the people, and for the people, though it definitely excludes the notion of rule by despot or by dictator, contains no inherent guaranty of the private enterprise system as we know it here and no inhibitions against government activity in business, agriculture, or any other field."

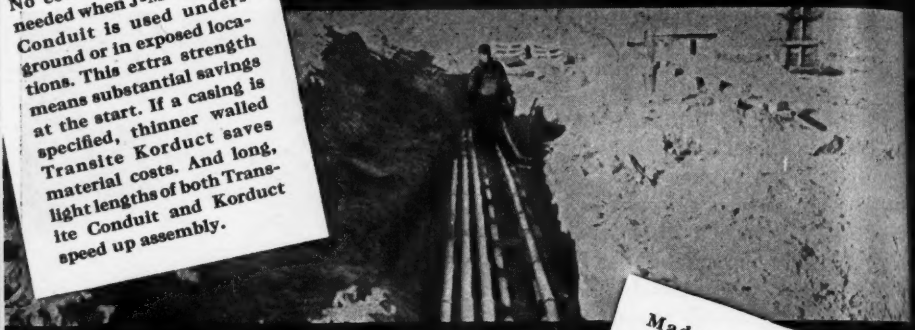
Excerpt from Banking

"So much has been said about the billions appropriated by the government, that it is easy to forget how flat the effort would be if it failed to swing into action the entire economic equipment of the country. The money that the government will spend and lend for rearmament will be only a fraction of the amount to come from banks, corporate surpluses, and other private business sources."

WHY NOT USE DUCTS THAT..

COST LESS TO INSTALL

No concrete envelope is needed when J-M Transite Conduit is used underground or in exposed locations. This extra strength means substantial savings at the start. If a casing is specified, thinner walled Transite Korduct saves material costs. And long, light lengths of both Transite Conduit and Korduct speed up assembly.



RESIST CORROSION

Made of asbestos and cement, J-M Transite Ducts can take plenty of severe punishment from corrosive soils, weather, smoke or acid fumes. 100% fireproof, they have exceptionally high resistance to flame and arc, and do not contribute to gas formation when burnouts occur. These ducts will not rot or decay — reduce maintenance costs wherever used.

STAY SMOOTH INSIDE

The interior surface of Transite Ducts is unusually smooth, and it *stays* smooth. Joints are tight and snug. Long cable pulls may be made without injury to the sheath...cables can be easily removed.

• • •

There are many other reasons why Transite Ducts assure lower distribution costs. For details, write for brochure DS-410. Johns-Manville, 22 E. 40th St., New York City.

Johns-Manville TRANSITE DUCTS

FOR LOW-COST ELECTRICAL DISTRIBUTION

"MIDDLETON FAMILY" box office hit

THE five-reel Technicolor, "Middleton Family at World's Fair" now being shown in theatres, clubs, schools and to other groups, deftly portrays benefits of electricity for every American family and industry. It is a film your own employes would enjoy and is available for your use through any Westinghouse district office.

Effective promotional activity of this kind backs Westinghouse developments in electrical appliances and power equipment . . . thus providing your customers with up-to-the-minute information on modern electrical efficiency that leads to savings for them and increased load for you.

Westinghouse activities in research, in the manufacture, distribution and application of apparatus, and in promoting the use of electricity, result in better service to you and a wider use of electricity by your customers. They have been made possible and are continually encouraged by your purchases of Westinghouse apparatus.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, EAST PITTSBURGH, PA.

Tune in "Musical Americana," N. B. C. Network, Coast-to-Coast, every Tuesday evening.

Westinghouse

ELECTRICAL PARTNER OF THE CENTRAL STATION INDUSTRY

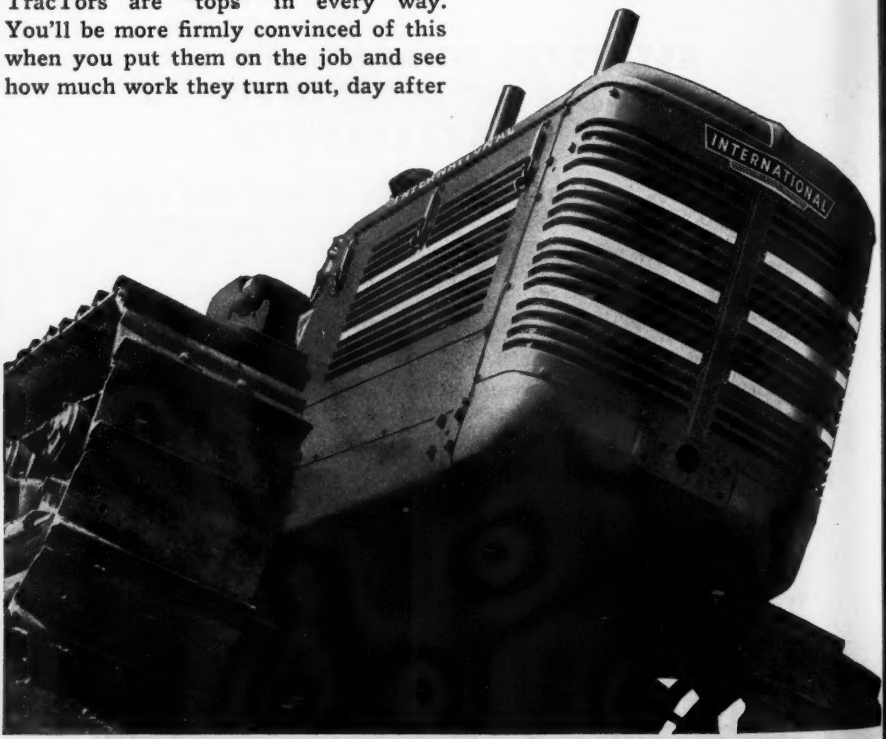
The *MEASURE* of Crawler Power Today

International Diesel TracTracTors have brought *new ideas of crawler design, efficiency,* and *economy* to every industry. With the introduction of the big, powerful International TD-18 a year ago, *new standards* were set. And now the new TD-14, TD-9, and TD-6 extend International's advantages to *all* crawler-tractor needs.

When you see *all* the features of TracTracTor design you'll come to this conclusion: International Diesel TracTracTors are "tops" in every way. You'll be more firmly convinced of this when you put them on the job and see how much work they turn out, day after day, and how they slash costs right an left.

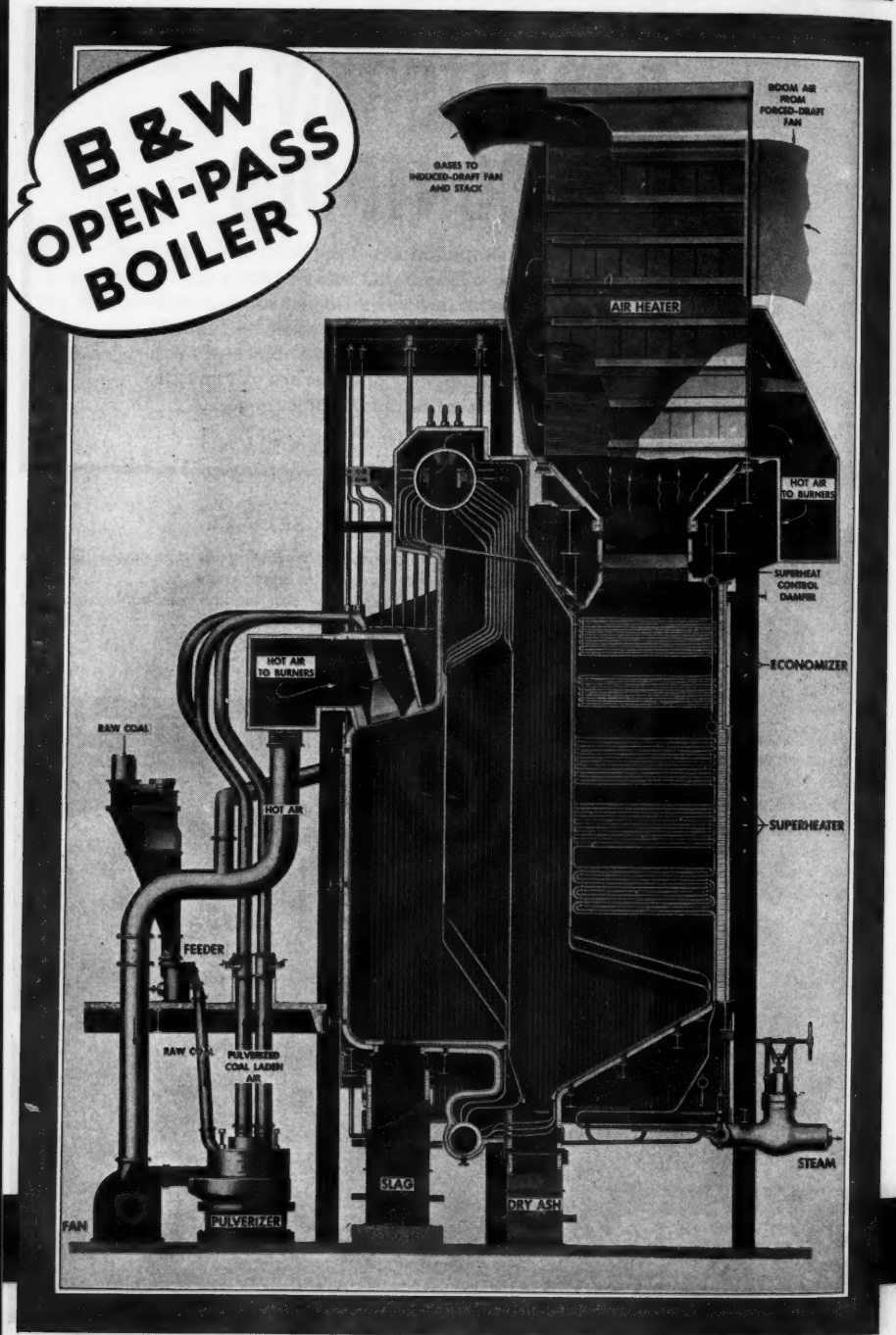
Match up this *perfectly designe balanced power* with balanced allie equipment and watch the combinatio produce! The nearby International i dustrial dealer or Company branch wi give you a convincing demonstratio any time you say.

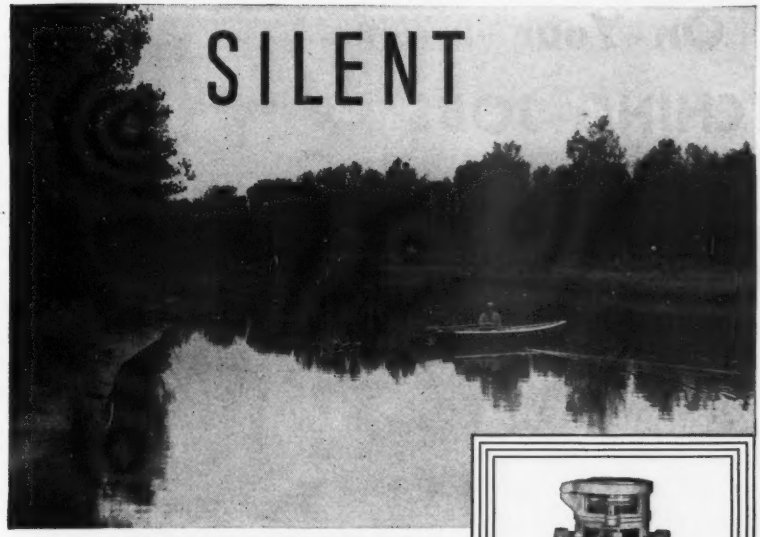
INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue, Chicago, Illino



INTERNATIONAL HARVESTER

This page is reserved under the **MSA PLAN** *(Manufacturers Service Agreement)*



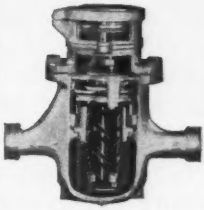


The PITTSBURGH IMO METER

THE absolute noiseless operation of the IMO Meter is a feature much appreciated by waterworks men who have long been troubled by consumer complaints over the annoying clicking sound made by conventional meters. With ordinary meters this noise varies in intensity with the length of service. A worn meter, especially when installed in certain types of frame dwellings, can produce a disturbance which will be amplified and telegraphed throughout the entire structure. The increasing use of flexible copper tubing in plumbing also accentuates the transmission of meter noise.

The IMO Meter, due to its basic construction, will never become noisy. It operates quietly, both when new, and after millions of gallons have been measured. The absence of nutating or oscillating parts results in a smoothness and quietness of operation that sets a new standard for domestic meters. Write for Bulletin W-529.

PITTSBURGH EQUITABLE METER COMPANY
MERCO NORDSTROM VALVE CO.
NEW YORK · BUFFALO · PHILADELPHIA · KANSAS CITY · TULSA · LOS ANGELES
Main Offices · PITTSBURGH, PA.
DES MOINES · CHICAGO · COLUMBUS · MEMPHIS · OAKLAND · HOUSTON



The Unique Measuring Chamber Responsible for the Accuracy, Silence and Long Life


NICKEL BRONZE MEASURING CHAMBER


THE ROTORS


MONEL METAL FINE MESH STRAINER

The accompanying illustrations show the fundamental elements of the IMO measuring chamber. Three hard rubber screws, called rotors, mesh with each other and closely fit in the bore of a nickel bronze casing. Water enters this casing, or measuring chamber, from the bottom and, as it is forced upwards by line pressure, causes the rotors to turn from its path. They rotate in a continuous flow with the threads of rotors acting as a continuous piston always moving in a forward direction. The center rotor drives the register while the two side rotors serve as the sealing mediums. A circular mesh strainer of monel metal completely encircles the measuring chamber.

Remember PITTSBURGH IMO METERS WEAR IN WHERE OTHERS WEAR OUT

"Sorry, I'm not going—I'll be shopping instead!"

"HIS SPEECH at the club luncheon is going to be about advertising, and I know just what he's going to say. I've read his book.

"He's *against* advertising . . . says it adds to the cost of living . . . that it misleads and deceives the public.

"Tommyrot! Dad's first car cost more than two thousand dollars. Ours cost less than half that much and it's a better car.

"Our first package of corn flakes was fifteen cents. Now we get *two bigger* packages for fifteen cents and they reach us fresher and crisper.

"Mother wore silk stockings only on Sundays because they cost so much. I wear them every day!

"I think the lecturer is all wet. Tell him I wouldn't enjoy his speech. The only ad I ever read that sold me a poor bill of goods was the one about his book."

★ ★ ★ ★ ★

Venomous books and speeches, in which radical agitators attack advertisers, have been much in fashion these last few years. But the novelty is wearing off and interest wanes as one after another of the attackers figures prominently in the findings of the Dies Committee.

Advertising is not a sinister something to suspect. It is just a part of selling, a proved method of increasing business activity—a condition we've all been praying for since 1930.

It has introduced new luxuries and improved necessities in towns and villages at the same moment as in the great metropolitan centers.

It has played a leading part in lifting home drudgery from the backs of women, putting the nation on wheels, improving our diet, hygiene and appearance. By stimulating mass production it has brought down the cost of the things we buy. It has helped keep our factories busy, our people at work.

Let's cheer advertising on. Help it to give business a lift. *What helps advertising helps you.*

This message is published by

NATION'S BUSINESS

It is the 43rd of a series contributed to a better understanding of free enterprise. If you believe that advertising is a good thing and should be encouraged, why not say so plainly when you hear it slandered?

Dictograph Intercommunicating Equipment being used by Customer Contact Clerk in securing credit verification from History records. Loud Speaking Equipment allows both hands of History Clerk free for handling necessary records while relaying information.

IMPROVE YOUR *CUSTOMER CONTACTS*

How *rapidly* can your Contact Clerks take care of service applications . . . bill questions . . . complaints?
How satisfactorily to your customer? . . . Do your transactions pass the "peak load test"?

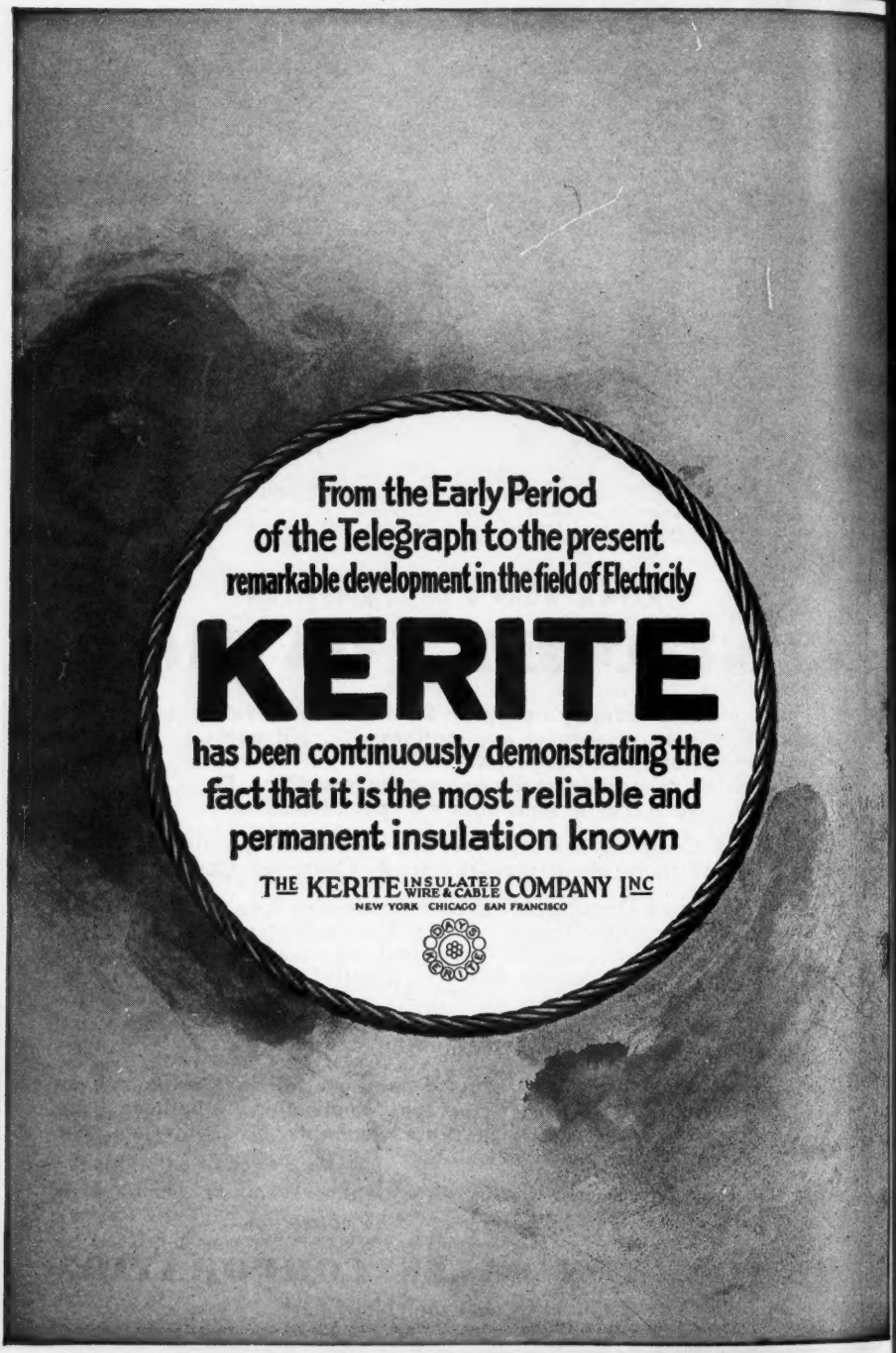
Unless your Company has a perfect score on these questions you will want to know more about the Dictograph Customer Contact System.

Specially designed Dictograph Intercommunicating Equipment for Contact Clerks provides instant entree to Credit, Meter Records, Service and Unit book information. Green and red signals bring back Credit approval or rejection,—swiftly . . . silently! *Loud speaking* Dictographs for Credit and Service Clerks permit use of *both hands* for record references, enabling personnel to check records speedily and accurately during peak periods.

Existing record facilities can be linked up to centralized Customer Contact Clerks by means of Dictograph. Applications, Duplicate Bills, Comparative Readings, High Bill Complaints, Discounts, etc., can be efficiently and speedily handled.

May we have our Special Utility Representative call to discuss your problem with you . . . . no obligation.

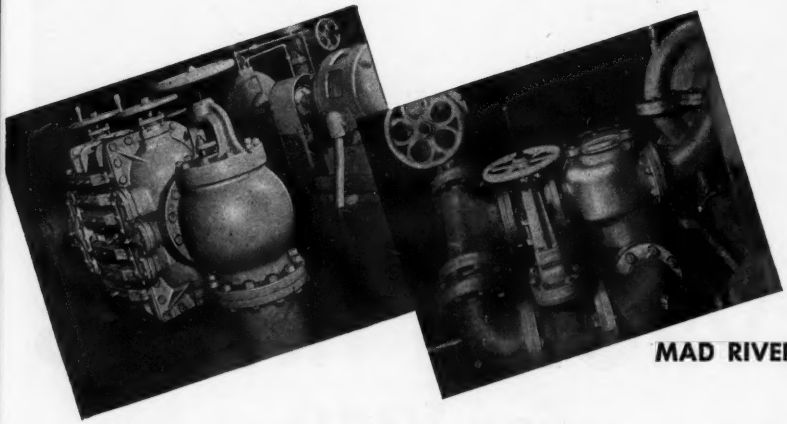
DICTOGRAPH SALES CORPORATION
580 Fifth Avenue, New York



They keep on making good!

SCHUYLKILL

ELLIOTT *strainers*



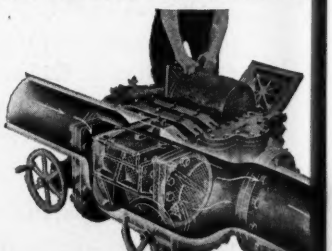
MAD RIVER

Year in and year out, smoothly and efficiently, these strainers do their job. Many plants have been using Elliott Strainers for years, as in the Schuylkill Station of The Philadelphia Electric Company, and Ohio Edison Company's Mad River Station. These strainers have been in service 16 or 17 years.

The phantom view of the Elliott Twin Strainer, (below) shows how one basket is lifted out for cleaning while the other takes over the job. Cleaning is simple — continuous operation assured.

Single strainers are used for intermittent service. The Mad River Station has an Elliott 6-in. Single Strainer in the ash sluicing water line which is used three or four times a day, thus leaving plenty of time for occasional cleaning.

But no matter what Elliott Strainer you may select, Twin, Twin Oil, Single, or Self-Cleaning, you can be sure that you are going to have a trouble-preventing, dependable piece of equipment.



Bring your straining problems to Elliott engineers. Instructive bulletins on all types of straining are yours on request. Why not write today?

A-255

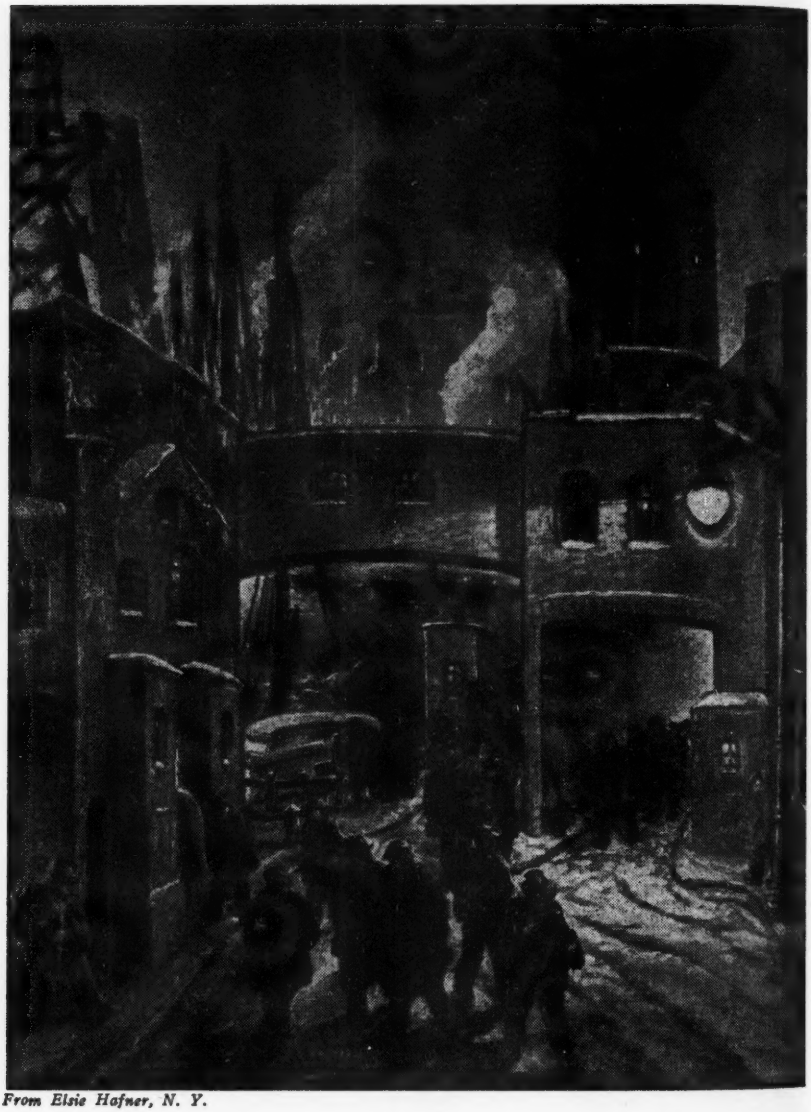
ELLIOTT COMPANY

Accessories Dept. **JEANNETTE, PA.** *District Offices in Principal Cities*

Utilities Almanack

SEPTEMBER

12	Th	¶ *Telephone Association of Maine, New Hampshire Telephone Association, and Vermont Telephone Association open joint meeting, Poland Spring, Me., 1940.*
13	F	¶ *American Water Works Asso., Michigan Sec., adjourns, Ann Arbor, Mich., 1940.* ¶ *American Bar Association ends annual convention, Philadelphia, Pa., 1940.*
14	Sa	¶ *Empire State Gas and Electric Association will hold convention, Rye, N. Y., Sept. 26, 27, 1940.*
15	S	¶ *American Public Works Association will hold convention, Detroit, Mich., Sept. 30–Oct. 2, 1940.*
16	M	¶ *American Water Works Asso., Rocky Mountain Section, opens meeting, Denver, Colo., 1940.* ¶ *Wisconsin Utilities Asso., Accounting Sec., convenes, Green Lake, Wis., 1940.*
17	Tu	¶ *South Dakota Telephone Association will hold meeting, Sioux Falls, S. D., Oct. 3, 4, 1940.*
18	W	¶ *Pacific Coast Gas Association opens annual convention, Coronado, Cal., 1940.*
19	Th	¶ *Southeastern Electric Exchange, Engineering and Operation Section, opens meeting, Charleston, S. C., 1940.*
20	F	¶ *American Gas Association will hold annual convention, Atlantic City, N. J., week of Oct. 7, 1940.*
21	Sa	¶ *Public Utilities Association of West Virginia will hold annual meeting, White Sulphur Springs, W. V., Oct. 4, 5, 1940.*
22	S	¶ *American Transit Association begins annual convention, White Sulphur Springs, W. V., 1940.*
23	M	¶ *International City Managers' Association convenes, Colorado Springs, Colo., 1940.* ¶ *League of Kansas Municipalities starts meeting, Topeka, Kan., 1940.*
24	Tu	¶ *Association of Iron and Steel Engineers starts convention, Chicago, Ill., 1940.* ¶ *Society of Automotive Engineers starts tractor meeting, Milwaukee, Wis., 1940.*
25	W	¶ *United States Independent Telephone Association will hold annual meeting, Chicago, Ill., Oct. 15–18, 1940.*



From Elsie Hafner, N. Y.

"End of Day's Toil"

From a painting by Maurice Kish

Public Utilities
FORTNIGHTLY

VOL. XXVI; No. 6 SEPTEMBER 12, 1940

Communications if War Comes

The defense plans which provide for necessary and extensive control of such services will be carried out, the author assumes, so as to interfere with industrial operation of the country as little as possible.

BY HERBERT COREY

IF war comes—or when war comes—the second thing this country will do will be to take over communications.

The first thing, of course, will be to put an army together. That will be by compulsory service statute. Chief of Staff George Marshall says that the present regular Army force of 270,000 is as large as can be hoped for from voluntary enlistments. The standing army is to be increased to 750,000 men, if the plans go well, and the men needed will be drafted. They will be called by selective draft, too, for chauffeurs and mechanics and pilots will be more needed than foot soldiers.

A part of that first job if and when war comes will be to give some of the more ordinary requisites to the soldiers. At present, for instance, it would take a year to clothe that new army. More than a year will be required to arm them. Food can be had because this is a well-fed country, for all the clatter that is made about the forgotten men, but not less than one year will be needed to put shoes on the men. Only Heaven knows how or when they can be made into soldiers. Once they are uniformed and armed and put under roof and supplied with blankets and mess kits and company cooks they are ready for training. But for the most part they must be trained by young officers who are still in the goose-down. A man can be trained in nine months, especially if he is being trained by an Army sergeant

of the older vintages, but it takes more time to discipline him until he is a real soldier. The nine months' training time is just a fancy dream.

So much for the first part of the job if and when war comes. The second part is the control of communications facilities.

There are 800 standard broadcast stations, 100,000 licensed radio operators, 400,000 employees of the wire services, and 55,000 amateur hams.

There are 132,000,000 other people, each of whom would be directly or distantly concerned with the government's business of making war. Some will be spies, because there are always spies. It is not a lucrative business and there is always the possibility that a spy will come to a sticky end; but some people are born spies and nothing can be done about it. Some chatterers cannot keep their mouths shut. Some of the radio and wire employees will be traitors who will sell information if a buyer comes along. Ten words about the cargo of a vessel or an open door of a powder warehouse or a change in plans might do an incalculable harm.

Therefore all communications will be checked and censored, if and when war comes.

No suggestion is being made here that we are in any immediate danger of war. I have yet to meet any responsible officer of the Army or Navy, or for that matter of the State Department, who thinks in his heart that we are in any immediate danger. It is a fact, however, that conditions in Europe have brought about a state of acute uneasiness in this country. This has been added to by the constant talk of "hemisphere defense" which emanates from high quarters and is echoed on Capitol Hill. If that becomes a national policy, we have departed widely from the tenets of our forefathers, although perhaps not so very far from their practice. If we do go in for a defense of the hemisphere, which in effect means its domination, military men say grimly we are in for it. A hemisphere bounded by Greenland to the east, Hudson bay at the north, Patagonia in the south, and Guam in the west could swallow up a lot of defending. Perhaps we will not have to defend it. But if the World War does slop over so far in our direction that we begin to get up in the morning to the tune of bugles, we may be sure of one thing:

Communications will be watched at every mousehole.

Here is one good thing about the plan for the watching. It will be so arranged, if the planners are right, that business will be interfered with as little as possible.

Here is one doubtful thing about it. Communications would not come out of a war in just the same shape that it went in. Already there are movements which look as though a government censorship in peacetime may—*may*—be clamped down on radio. There is a distant possibility, not so large as the palm of a man's hand, that the wire services might emerge from the struggle in the complete possession of the government. I believe neither of these things will happen, but then I am an easy believer. The possibility is merely being placed on the record.

In preparation for what might happen, a Communications Defense Commission has been planned. The

first draft was drawn by Chairman J. L. Fly of the FCC and presented to the President. It was well received by him and has been submitted to and approved by the departments concerned. It can be put in operation by an Executive Order and, if it is, it will have in its power authority to manage all communication services. I am assured, however, that the military authorities who will be on the CDC, if and when it is created, recognize the fact that the industrial operations of the country must not be interfered with except when circumstances force that interference. In the preceding sentence the military authorities alone are referred to. Mr. Fly of the FCC is regarded in some circles as rather impetuous. There will be one or more representatives of the reforming branch of the New Deal on the CDC beyond question. Chairman Olds of the FPC has been mentioned. So has Adolph Berle, Assistant Secretary of State, who is rated as an extremely able man.

"He is wilder than a wood duck in his intellectual exercises," said a man who knows him well, "but in practice he manages to keep his feet on the ground."

No doubt dissenting voices could be heard if one wished to listen. It is taken for granted that, if and when the CDC is established, General J. O. Mauborgne, chief signals officer of the Army, Rear Admiral Leigh Noyes, director of naval communications, Commander Joseph F. Farley, chief communications officer of the Coast Guard, and Thomas Burke, chief of international communications of the State Department, will be members. If that proves to be the case, the commission will be tolerably conservative. The military men will conduct their censorship as guided by their military needs, of course, but they will only tighten it as compelled. They would not interfere with the operations of factories or trains or trucks unless they literally had no choice. It is thought that preliminary measures of safety will offer all the protection needed at least during the early months of preparation.

"There is a 100 per cent chance of leakage in the wire services compared to a 20 per cent chance on the radio," said Chairman Fly of the FCC.

WRITTEN messages can be controlled, of course. They are subject to censorship at the point of origin and to checking all along the line. They are also open to the eyes of any spies or fools or traitors along the line. The innocent and important information carried in a message may be of priceless value if it can be gotten into enemy hands. The prospective members of the

¶ "RADIO'S *difficulties in guarding its communications will come in dealing with the authorized transmitters to the 45,000,000 receiving sets. All of the 100,000 radio operators must have licenses from the FCC, along with the 55,000 hams. The regular commercial broadcasting will not be interfered with. There is no need to interfere, for one thing, and it is accepted that interference would lower the popular morale.*"

CDC are confident that the officers of the wire services are doing and will do everything in their power to coöperate, but it is not to be expected that out of the army of wire employees every dangerous man or woman can be isolated. Nor would it be fair and decent to take jobs away from men and women for no other reason than that they were born in the wrong place and speak with something less than a 100 per cent American accent.

The only thing that can be done, therefore, is to insist that all such employees be American citizens, either by birth or naturalization. The wire companies are coöperating in this, but the inquiry is very distinctly not taking the character of a hunt. The wire employees will only be asked to state whether they are citizens. These statements may be checked by the FCC later on, if the emergency grows really pressing. At present it can only accept statements as made, but the time may come when not only the citizenship of a wire employee but the affiliations and race ties of his friends and associates will be looked into. Emphasis should again be placed on the fact that the companies are coöperating but there is no reason to expect absolute loyalty from all their employees. It is this possibility that is being guarded against.

If the utterly impossible were to happen and the wire companies and their people prove noncoöperative, it would be possible under an existing statute for the government first to inventory and then purchase the property of the wire companies.

THERE are no statutes in existence giving the government authority to impose its control on the companies, except a section in the Communications Act of 1934, which might be stretched far enough to give the government anything it wants. This is not a practical consideration, however, for the occasion would never arise. In any event, if and when war comes, a group of bills are now lying in the desks of congressional leaders, covering every possible phase of every possible situation. They could be made into laws literally at an hour's notice. As a practical proposition, then, if forced by conditions, the CDC would have all the powers it could use. Even if no further legislation were enacted, an Executive Order could clothe the CDC with all the authority it could use and there would be no one to challenge it. In wartime no one talks back to the government.

Black-outs then might be ordered over given areas, for varying periods. Certain hours might be set aside each day for the exclusive use of the military. Domestic telephoning might be forbidden completely. The use of foreign languages on the telephone could be forbidden. It would be possible to require would-be users to write out their telephone messages, have them visaed, and know that, when telephoning, their words would be checked by a listener or a sound-recording device. Anything might happen, for war is a fantastic folly at its best and weird things become normal in wartime. But it may be taken for granted that there will be absolutely no interference with telephone or telegraph services unless and until control becomes imperative. It may also be taken for granted, as Chairman Fly said, that the chances of leakage from the wires would be excellent. If the country really got down to business the control of wire busi-

Federal Control of Radio

"THERE is unquestionably some uneasiness felt by the radio industry about what might happen if government should amplify its present control. Radio has several complaints against the FCC . . . Fear has been expressed that under cover of a need for war-time control, regulations would be set up from which the industry could never escape."

ness would be tightened as fast as necessary and in the areas necessary. There are thousands of miles of line that need not be watched, except as the operators watch voluntarily.

RADIO is a different kettle of fish. It is right out in the open, like the Mississippi river. The chance of sneaking a little treason over the networks or doing a bit of surreptitious broadcasting with a hidden transmitter or one of the portable transmitters that can be carried in a suit case is slender. But the chance does exist. Hence, the elaborate precautions the FCC is preparing, which will be added to and tightened by the CDC if and when that body comes into being.

The FCC has just been given an additional $1,600,000 for the purpose of setting up an inspection service. The members of this service are to be drawn from the Civil Service registrants as far as possible. As a side issue they will look into the nativity and background of the employees of the wire service companies, but their principal business will be to check up on radio broadcasts. Now and then an illegal and unlicensed transmitter will be found. Some of the diathermic instruments in the offices of doctors and surgeons can be made to double very handily as transmitters. Ingenious electricians can make transmitters in a few hours, send a few messages, and then hightail it for the timber before the inspectors can get around. One man had his little transmitter so ingeniously camouflaged that only a bit of luck discovered it. The inspector searching for it was provided with one of the little detector instruments, with which to peer around through the ether, but it had not registered a suspicious current. He and his companion were prowling the back yard of the suspected person when one said:

"Look how funny that electric light on the porch is acting—"

So they got that man.

THE 55,000 amateurs of radio—the "hams" who are the best pals of the Army and Coast Guard whenever flood waters begin to back up a valley—are detectors of unlicensed operations almost to a man. They are licensed by the FCC; the rules they obey are strict; and when an outlaw gets into the ether they are put out enough to pout. More later about the hams. The FCC believes that the several hundred

inspectors they will have on the job, plus 10 primary long-range direction finding stations and 400 mobile direction finders on trucks, will catch in short order anyone trying to broadcast illegally. It must be admitted that an outlaw could set up his transmitter, send a message to his opposite number, and get out again before being caught. But his chance of freedom would be limited. The direction-finders operate with a method of triangulation so accurately that they cannot only find the house from which the transmitting is being done, but actually spot the room where the machine is located.

Radio's difficulties in guarding its communications will come in dealing with the authorized transmitters to the 45,000,000 receiving sets. All of the 100,000 radio operators must have licenses from the FCC, along with the 55,000 hams. The regular commercial broadcasting will not be interfered with. There is no need to interfere, for one thing, and it is accepted that interference would lower the popular morale. Jack Benny and Fibber McGee and Gracie for President and the other entertainers of the air are needed by people who might otherwise be compelled to listen to dollar-a-year orators. Newscasts will not be interfered with, either, although if circumstances dictate they will be censored. It is recognized now that the man or party who has control of the air can swing the public almost in any direction desired.

There are programmists who know just how such a swing could be managed. If the commercial programs were shut off, too, an immediate effect on business would be felt. The CDC will be very careful—or try to be careful—to do no harm.

THE prospect for an enemy to sneak a little information on a regular broadcast will be practically nil. If any foreign language broadcasting is permitted, the scripts must be translated and checked and compared. A change of even a word would bring about condign punishment. All scripts will be read by the CDC inspectors and a doubtful word or phrase must be satisfactorily explained. Every one connected with the actual business of broadcasting will find that his past and present and his wife's relatives will be inquired into. There are now 26 FCC stations at strategic points in the United States, keeping constant watch on broadcasting operations, and these will be further aided by the monitor units. These units for the most part confine themselves to locating unauthorized transmitters. The inspectors of the FCC do the police work of catching the operators redhanded and bringing them before the FCC court.

In the past year more than 1,000 violations of the Communications Act were reported and the number of violations seems to be increasing. In wartime these violations would be considered a very serious offense. Most of them at present are being committed by enthusiastic amateurs, and some of them by boys who have stuck together a transmitter on plans of their own. The FCC, however, has recently warned operators on board ship against unnecessary chatter and most especially against anonymity. Not long ago a message came in, ostensibly from the U. S. Destroyer Barry, to the effect that it had been hit by a German torpedo and was sinking:

"We can last only three hours," said the anonymous liar.

ONE of these days the FCC hopes to get the man who played that particularly dirty trick. The order forbidding unnecessary chatter has been extended to cover radiotelegraph and radiotelephone operators as well. One of the possible orders of the future may have to do with party-line and fence-post exchanges. There are in the country perhaps 30,000 little neighborhood circuits. They are coöperative affairs, put up at small cost by the coöperating farmers, and the "central" is often a farmer's wife who has the switchboard in her kitchen alongside the stove. Service is as good as can be expected, except that now and then the operator is out in the barn gathering eggs. The REA is considering the advisability of putting in some government money as an emergency measure to improve these fence-post lines. The wires, by the way, are often literally strung on fence posts and trees, and a great many of the exchanges have no more than a dozen or so subscribers.

In ordinary times they attract little or no attention, except that when some modification of the National Labor Relations Act was under congressional consideration recently the fence-post exchanges mustered enough political influence to exempt their operations from the bill. But if there should be war, it is possible that some of the cantonments will be located in sparsely settled sections where there are no other telephonic facilities at this time. The Army plans, in a general way, a series of 8-mile square telephonic boxes which could be dropped at need over an area. Somewhere within the 8-mile square block the deserter or the thief or the cheating peddler could be picked up. Fence-wire operators would be licensed, as would all other operators in time of war. But that will not come for a long time, and may not come at all. The if-and-when war comes is a strong protective clause.

ALL of these plans are intended to be precautionary rather than disciplinary. The broadcasters and amateurs have been very coöperative in policing their own traffic. The broadcasters work through the National Association of Broadcasters and the hams through the American Radio Relay League. This has about 150-key stations through the country to keep a watch on amateur messages, and hardly a mail is received by the FCC which does not carry a letter from some amateur offering his services—unpaid—as a volunteer watcher. Amateurs are not permitted to use code in international traffic and are not allowed to communicate with ships at sea and, in a general way, are forbidden to do anything which might jar the very sensitive international situation. Not long ago a

¶ "THERE *are now 26 FCC* [*radio*] *stations at strategic points in the United States, keeping constant watch on broadcasting operations, and these will be further aided by the monitor units. These units for the most part confine themselves to locating unauthorized transmitters. The inspectors of the FCC do the police work of catching the operators redhanded and bringing them before the FCC court.*"

New York station began decoding the short-wave orders issued to their military and naval forces by both the British and the German administrations. It is to be assumed that both sides were quite familiar with what the other fellow had to say, but that station was shut up overnight and barely escaped being shut off entirely.

There is unquestionably some uneasiness felt by the radio industry about what might happen if government should amplify its present control.

Radio has several complaints against the FCC, none of which need be touched on at this time. Fear has been expressed that under cover of a need for war-time control, regulations would be set up from which the industry could never escape.

For the moment, however, it may be said that the prospective members of the prospective CDC are delighted with the spirit of coöperation shown in every field of communications. The Army and Navy men who will presumably be on the new commission are assuredly on the side of conservatism and the protection of business against needless interference. As the civilian members are not yet to be identified at the time of writing, it may only be guessed that they will be chosen because their attitude would be the same. The commission is to have a close relation with the Knudsen-Stettinius Defense Advisory Commission in charge of industrial mobilization and this should be a straw showing the way the wind blows. It must have a close understanding with Jesse Jones of the RFC, too, and he is distinctly conservative.

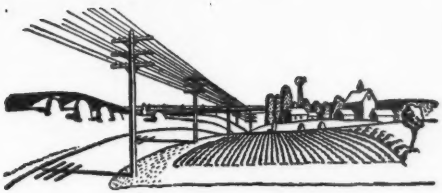
He will be asked for money with which to fill any gaps which in practice may be found to exist either in the wire or the radio nets. It is the plan not merely to cover the ground, including our island possessions, but to set up a duplicate set of facilities so that if one goes out the other can carry on. All of this, of course, is based on if-and-when-war-comes; but if war does come it looks as though communications will function as freely as in peace time to all practical purposes.

Water—the Orphan Stepchild

"In the entire natural resource family, water is the orphan stepchild. It has been dammed and diverted, drained and polluted, stolen and wasted, with utter disregard for its natural values or its biological functions and its public aquatic and recreational values.

"With the single exception of air, water is the most truly public of all natural resources, yet no other has been so wantonly neglected and abused in its exploitation for private profit or political expediency."

—Kenneth A. Reid,
Izaac Walton League of America.



Arkansas' "Good Neighbor Policy" for Rural Electrification

Will the rural electrification movement prove a long-range success through the medium of local coöperative enterprise? It will take some time before this question can be answered conclusively, according to this author, but a good start has been made in Arkansas where the co-ops and private power interests have been working together on the problem of putting and keeping power down on the farm.

By H. W. BLALOCK
MEMBER, ARKANSAS DEPARTMENT OF PUBLIC UTILITIES

Is it possible for farmer-owned, government-financed rural electric coöperatives and private electric companies to operate side by side without friction, invasion of one another's territory, parallel construction, and, in general, cut-throat competition? Is it a situation similar to that which existed in the early period of development of the electric industry where several electric companies attempted to serve the same market? Will the ultimate result be the absorption of one by the other?

The results obtained in Arkansas during the past three years give one answer to the first two questions. In January, 1937, when a new state utilities commission was appointed, the outlook for harmonious development of farmer-owned electric coöperatives in the rural areas contiguous to private electric company territory was not very encouraging. Farm groups with the aid of farm organizations and agricultural extension workers had attempted to develop electric coöperatives for two years prior to 1937. These farm groups had organized and applied to the Rural Electrification Administration for loans but no loans had been approved.

Several reasons can be given for this stalemate in coöperative rural electric development:

(1) Most private electric companies opposed the development of coöperatives. Private companies seemed to feel that they were fully able to make all rural extensions needed; that the coöperatives, being a form of public ownership, were not warranted; that uneconomic rural development would occur, due to inexperienced coöperative management; and that the coöperatives might invade their markets and disrupt their service. At this stage of de-

velopment, private companies were accused of building "cream lines" into the areas where coöperatives were organizing.

(2) Coöperatives had been unable to obtain satisfactory contracts to obtain power at reasonable rates from the private companies. The REA would not lend money to the coöperatives unless power sources could be obtained and power purchased at reasonable rates.

(3) The electric coöperatives needed a special statutory enactment to provide for their needs. The coöperative laws then in existence were not suited to this new type of coöperative effort.

The newly appointed utility commissioners felt that there was ample opportunity for rural development by both the coöperatives and the private companies. The private companies had at that date extended service to less than 2 per cent of the farms in the state, although they had shown an interest in developing rural areas. The private companies had not included in their budgets more than $300,000 annually for their rural program and at that rate of investment it would take many years to get adequate rural service. Since the cost of capital to coöperatives was less than 3 per cent it was reasonable that they could build in more sparsely settled sections than could private utilities at higher money costs. So the argument of private companies that they could build all rural extensions needed could not be sustained.

THE greatest fear that private companies had, however, was the invasion of their markets and disturbance to their rate structures, particularly if coöperatives were subsidized by the government—in other words, a rate war to hold markets. Although the coöperatives could not serve anyone receiving central station service, the private companies feared that their customers would disconnect and go over to the REA.

These fears of private companies have been dispelled and harmony prevails in Arkansas. This has been brought about during the past three years, in which time 13 coöperatives have been organized in all parts of the state, borrowing nearly $5,000,000 from REA to construct and operate 5,500 miles of lines to serve over 15,000 farms. In the same 3-year period the private companies have invested approximately $800,000 to construct over 1,000 miles to serve over 3,000 customers. This is how it all came about:

The state legislature promptly and unanimously passed a Rural Electric Coöperative Act. This act exempted the coöperatives from state regulation with the exception of securing a certificate of convenience and necessity. This has proved a very wise provision of the act. It has protected both the coöperatives and the private companies from invasion of markets, duplicate construction, and "cream-line" construction, as will be shown later.

THE state regulatory body then ordered the private electric companies to file rates for wholesale service to coöperatives. Since the companies were not yet convinced that coöperatives as neighbors were good for their "system," they were reluctant to file satisfactory rates. But in due time

wholesale rates satisfactory to the REA, the coöperatives, the private companies, and the utilities commission were obtained. In fact, the wholesale rate obtained from the Arkansas Power & Light Company, the largest private electric company in Arkansas, was then and still is the lowest wholesale rate offered by private electric companies to coöperatives in the United States, averaging less than one cent per kilowatt hour.

The next step was to provide for orderly development of rural electrification in the state. This was accomplished by the state utilities commission through the adoption of comprehensive standard rules, after conferences with private companies and coöperatives. Since the coöperatives were required by statute to secure a certificate of convenience and necessity from the state regulatory body, these rules and regulations were made to apply to them as well as to private companies.

Whereas previously permits were granted for rural lines, the new rules provided that permits would be granted for rural areas. This area basis was adopted for both coöperatives and private companies. In adopting the new basis the commission stated:

1. The area should be completely served as far as economically feasible with the original construction.

2. An area can be developed when it shows promise of producing 18 per cent of cost per annum at the time of construction, and 25 per cent per annum after three years.

A rural area was defined as follows:

. . . any area outside of any incorporated city or town in Arkansas and includes both the farm and nonfarm population. Incorporated cities and towns not now served by central station electric service may be included in the electric development of a rural area. Line extensions into territory outside and contiguous to incorporated cities and towns may be considered as extensions to the distribution system of the incorporated city or town when served at the urban rates in that city or town, provided they are first approved by the department.

The rule further provided that

The applicant for a certificate of convenience and necessity to serve a rural area shall select an area which in his judgment can and should be developed as a unit. Parts of the area which are not now ready for development but which later can be served best by extensions from the original construction shall be included. The applicant shall consider in selecting such an area these characteristics which set it apart for development as a unit, such as present existing electric facilities, physical characteristics of rivers, mountain ranges, swamps, etc., the location of highways, roads, cities, towns, villages, and farms, and the potential market for electric service.

Another important feature of the rules provides that

The development of a project (or area) shall be considered as a whole and its economic feasibility shall be determined by the total estimated cost and return of the entire project. The project shall extend to all or as much of the area included in the application as is economically feasible as herein described. Development in an area subse-

¶ "THE *private company or coöperative applying for a rural area along with other information must furnish a legal description of the boundary of the area. The orders of the commission granting these rural areas contain these legal descriptions of these areas. The applicant, whether coöperative or private company, when granted a certificate, assumes full responsibility for developing the area and the exclusive right to serve the area.*"

quent to the initial construction shall be considered as a part of the initial project in determining its economic feasibility.

THE rules also provided that the existing rural facilities of private companies might be grouped in rural areas by proper application.

The private company or coöperative applying for a rural area along with other information must furnish a legal description of the boundary of the area. The orders of the commission granting these rural areas contain these legal descriptions of these areas. The applicant, whether coöperative or private company, when granted a certificate, assumes full responsibility for developing the area and the exclusive right to serve the area.

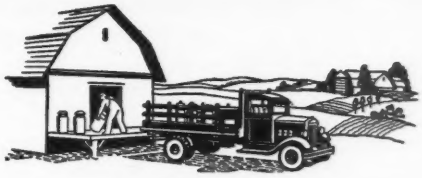
Probably the most difficult problem that has arisen under this type of development is in a situation where a coöperative applied for an area which surrounds territory served by existing private facilities. In practically every instance, these conflicts have been worked out by officials of the coöperative and the private company in conference at the commission offices prior to the hearing on the application. In these situations the area served by the existing facilities of the private company is blocked out, legally described, and granted to the private company. This area is excluded from the area granted to the coöperative. Through this method the area to be served by all parties is worked out and legally bounded before any new construction is made. Both coöperatives and private companies have been pleased with the allocation of area because they have been able to work it out themselves. Sometimes field trips by representatives of all the parties have resulted in full agreements which otherwise could not have been reached.

ANOTHER problem arises in serving customers along area boundaries. Many times it is more feasible for one company to cross over into the area of another and serve customers not accessible to existing lines. This can be accomplished by an exchange of letters between the companies agreeing to the extension and a copy filed with the commission. Many such agreements have been reached.

Crossover of an area of another is sometimes necessary but in all cases this has been settled by agreement.

This method of rural electric development has resulted in dispelling the fears that both private companies and coöperatives had of each other three years ago; it has brought about a realization by both that there is ample room for orderly private and coöperative rural electric development; it has prevented duplicate construction, sniping of customers, "cream-line" construction, rate wars, and strife. On the positive side it has extended service to thousands of farm homes which otherwise would be without electric service, has provided the means by which a fair test of coöperative rural development could be made, and has made it possible for every dollar available for rural development to be spent where it could do the most good.

The answer to the first question at the beginning of this article can be answered affirmatively if proper procedure is set up. Three years' experience in Arkansas demonstrates this fairly conclusively. The answer to the second question is that competition between coöperatives and private com-



Success or Failure of Coöperatives

"It is suggested by some that the electric coöperatives will follow the road to failure as did the rural telephone coöperatives which sprang up all over the country prior to the World War, while others feel that this is the first time the government has come to the aid of the farmer by giving him financial and operating assistance for co-op activity which will be the touchstone for success."

panies need not be similar to early competition in the electric utility field if procedure is used something similar to the Arkansas plan. Under different procedure it may result in a "dog-eat-dog" struggle.

Will the ultimate result be the absorption of one by the other? The answer to this question is not so clear. Recently I talked with a utility executive from another state where duplicate construction is permitted. He stated that his company was not extending rural service because he felt that in a few years his company would be able to buy in the bankrupt coöperative lines at 10 cents on the dollar. There is a great deal of fear on the part of many familiar with the development that the coöperatives are doomed to failure. However, there is honest difference of opinion. Some take the position that farmer coöperatives in the United States have never been successful except in a few instances; that failure is the rule and success the exception. Others point to the success of similar coöperatives in foreign countries as the basis for the success of our electric coöperatives. It is suggested by some that the electric coöperatives will follow the road to failure as did the rural telephone coöperatives which sprang up all over the country prior to the World War, while others feel that this is the first time the government has come to the aid of the farmer by giving him financial and operating assistance for co-op activity which will be the touchstone for success.

It can be stated that at present there has not been sufficient operating experience of the coöperative plan to draw conclusions of the ultimate success or outcome. However, it can be said that past coöperative failures are no criterion for evaluating present coöperative efforts unless those failures demonstrate that the American farmers are not coöperative, which, of course, has not been proved. Neither can it be said that government aid and

guidance *per se* will be the touchstone of success.

IN the first place, what is meant by success? If to succeed means actually performing the job of getting a program of rural electrification quickly carried out at reasonable cost, built according to recognized standards, giving electric service to thousands of farmers, then, as far as Arkansas is concerned, the program has already succeeded wonderfully well. Records show that the contract price per mile of coöperative line ranged from $776 to $468 for the construction of 5,340 miles of line constructed since May, 1937. The average contract price was $606. These per-mile costs have declined from an average cost of $693 on A projects, $569 on B projects, to $489 on C projects. All these costs include substations where necessary, transformers, house service connections, and meters. All construction has been according to approved standards. The average cost per mile for rural construction of private companies has been $666 during the same period. The co-ops have built their lines for $60 less per mile on the average than private companies.

If to succeed means that the coöperatives will be able to pay back all of their government loans, give good service, provide for plant expansion and depreciation of plant, that is altogether a different question. There are several favorable factors for the co-ops:

(1) Their existing lines are well built and at reasonable costs. (2) Their interest rate on government loans averages less than 3 per cent. (3) There is flexibility in the term of their contracts for loan repayment. Their loans are on a 20-year base and can be extended, if necessary, to twenty-five years under the present law. (4) Experience in Arkansas shows that once farmers take electric service they continue the service. Even at the bottom of the depression very few farmers gave up their electric service. (5) Farmers build up their electric loads. Farmers in Arkansas during the first ten months of 1939 used 684 kilowatt hours averaging $39 per customer, whereas residential customers used 610 kilowatt hours averaging $32 per customer. (6) There is good potentiality for load building in farm areas. The farm is more than a residence; it is a productive workshop. (7) Government assistance has been and should continue to be helpful to the coöperatives.

THERE are also unfavorable factors to be considered: (1) Coöperatives are developing in the "leanest" part of the electric market which has not been very desirable from the private viewpoint. Future expansion of coöperative lines will be in many cases into even "leaner" territory. Actually, this might be the danger point for coöperatives. If Federal investment-income ratio is lowered to permit expanding into these sparsely settled areas, it may result in placing too great a burden on present coöperative lines. The "Good Neighbor" or "Self-help Project," if successful, might remove this danger. (2) Coöperatives are very low in customer density. It may be reasonable to expect this at the beginning but the present position must be improved if co-ops are to succeed. The co-ops in Arkansas to Octo-

ber 31, 1939, had energized 2,255 miles of line averaging 1.9 customers per mile at an average customer cost of $365. Many of these lines had been energized only a few months. (3) Coöperatives have been infected with the disease of "expanditis." This may be due to growing pains. Future policy should consolidate their gains by developing the area now served by building up customer density. Short extensions to present systems may prove very profitable.

Plant expansion will be provided, no doubt, by loans from the Federal government in the same way as at present. As long as Federal appropriations are made for this work there should be no shortage of funds for expansion. It is my understanding that depreciation will be provided by amortizing the loan. If the life of the property equals or exceeds the loan period, all may work well if the coöperative can borrow to renew its property. Sound policy should provide for a reasonable retirement reserve if earnings permit.

Whether coöperatives fail or succeed, this much can be said: That the Arkansas plan gives the coöperative its own area in which to operate and develop. Both private companies and coöperatives are well pleased with their present status in this state.

Government Control of Insurance

"TAXPAYERS *should know that the only way government can sell any form of insurance more cheaply than old line legal reserve companies and with the same amount of safety is by arbitrarily lowering the price and then charging the difference up to those same taxpayers. No eliminating of agents or cutting in production costs can make up for the fact that the government is entirely unable to invest its money as advantageously as private companies. This is proved by the fact that during the last one hundred years life insurance companies have realized from 35 to 40 per cent better on their investments than the United States government.*

"There are two factors which should be sufficient to discourage the sort of bureaucratic idea involved in the proposed government control of life insurance. First, the Supreme Court, in a series of notable decisions, has ruled that life insurance is not interstate commerce and is therefore subject to regulation only by states; and, second, the honest and efficient supervision by state commissioners has met with complete public approval."

—CHARLES J. ZIMMERMAN,
President, National Association of Life Underwriters.

The Hetch Hetchy Tie-up

As a victim of imposed Federal power policy, San Francisco, says the author, occupies a unique position. He declares that it represents the only instance in which the Federal government has written into law its clear desire to force public ownership on any city or region.

By THOMAS L. NORTH

In one form or another, the Hetch Hetchy situation has been an ever-recurring problem to San Francisco since 1901, when the city first decided to go to Yosemite National Park for its water supply. In the Raker Act, passed in 1913, Congress gave San Francisco the right to use these Federal lands for its water-power project, but the public ownership, anti-monopoly group then dominating the congressional scene decided to include a clause which would force the city to dispose of the incidental power solely through public agencies. Despite frequent attempts to comply, the city government is still trying to find a way to conform to the famous § 6 of this act. The matter has now come to a serious head through the intervention of Secretary of Interior Ickes, whose contentions have been fully supported by a recent Supreme Court decision.

Seven times has the issue of public ownership of power facilities been presented to San Francisco's voters in varying forms; seven times have the voters defeated the proposals. (See Table I.) Five of these plans called for complete acquisition of the privately owned distribution facilities in the city. Should lease negotiations now under way between the city and Pacific Gas & Electric Company fail to receive Secretary Ickes' approval, another election under pressure from the Interior Department will very probably be held in the near future on the issue of acquisition.

In the meantime, Federal District Judge Roche, after giving the city numerous extensions of time at the request of the Interior Department, acting through the Department of Justice, has stayed the injunction against the sale of power to Pacific Gas & Electric until October 1, 1940, on the presumption that by that time some solution will be worked out enabling the city to comply with the Raker Act. Inability

to solve this problem in some form would mean, under § 6 of the Raker Act, that San Francisco would be enjoined from selling Hetch Hetchy power, from which it grosses about $2,400,000 annually. (See Table III.) Furthermore, the city would face the possible permanent recapture of this power by the Federal government.

THE San Francisco board of supervisors has approved a recent ultimatum of Secretary Ickes, in order to get the injunction stayed to June 30, 1941. However, Ickes is very determined, and there are cries of "dictator" and "Little Caesar" in high places. It now seems that Hetch Hetchy has almost lost its significance as a power issue, but has become a political issue of democracy *v.* dictatorship.

At any rate, the city agrees to do its best to strike a leasing arrangement with PG&E by October 1, 1940, whereby the city would fully take over the operations with its own employees and policies. If an arrangement satisfactory to Ickes cannot be reached, the city has agreed to hold another revenue bond election at a time satisfactory to Ickes, but not later than December 17, 1940, for the acquisition or construction of a municipal system.

The city, through its various officers, boards, and commissions will do its utmost to support a favorable outcome, it is agreed. Ickes tried to get civic groups to agree to back the municipal ownership issue, but these groups have refused to take any stand pending a full consideration of the proposal to be issued.

Furthermore, the city through its boards, commissions, or any member thereof, has agreed not to initiate or petition Congress for amendment of the Raker Act prior to the election, and will oppose any such attempt. Ickes originally wanted the city to agree to this without time limit. Moreover, the city has agreed not to enter into any lease, contract, or any other arrangement for handling this power without consent of the Secretary.

There is some doubt as these lines are written just how the latter will be phrased, as the city might desire to make a lease and test its validity through the courts. Perhaps a time limit will be put on this. Originally, Ickes wanted the city to agree to issue revenue bonds whether or not approved by the voters and go to court to test their validity. The city has agreed to take all steps necessary to finally clear up the matter of Raker Act compliance by July 1, 1941.

ICKES has been attacked in the San Francisco press for attempting to deny the city the right to petition (for Raker Act revision); for forcing his interpretations on the public regardless of their wishes and for trying to "muzzle" not only the city, but the newspapers and civic organizations. The feeling is rather bitter; it is pointed out that San Francisco is discriminated against, inasmuch as the East Bay Municipal Utilities District, serving cities across the bay from San Francisco with water from the Mokelumne river, obtained a grant fifteen years after the Raker Act, and has an entirely free hand in power development, continuously selling power to PG&E at the dam.

Pacific Gas & Electric has recently

been ordered to cut its electric and gas rates $5,000,000 a year, effective October 1st. This is a California Railroad Commission order. This means San Francisco's electric rates will come down $500,000 a year. The city, now working on "Plan 9" for possible submission to the voters (calling for bonds of from $58,000,000 to $63,000,000) must now revise its plans in light of this cut.

It all goes back to 1901, when the city filed an application with the Department of the Interior for permission to build a water supply system in Yosemite National Park. The decision to use the Tuolumne river system, known as the Hetch Hetchy system, was arrived at after city engineers had made exhaustive studies of 14 possible water supply sources. Hetch Hetchy was picked because of (1) purity of the water, (2) presence of the largest amount of water, (3) availability of the largest and best reservoir sites, (4) freedom from conflicting legal claims, (5) power possibilities. Power development was regarded as an outstanding contribution to the financial soundness of this $100,000,000 project. Hetch Hetchy water, incidentally, is relatively expensive, as it flows through an aqueduct 111 miles long to San Francisco from the Sierra Nevada.

Doubt concerning the Secretary of the Interior's authority to make a grant to the city, plus changing attitudes of the successive Secretaries, made it necessary to get a special congressional grant definitely stating the city's rights. Present in Congress in 1913 were strong public ownership protagonists, with the result that the Raker Act, as finally signed by President Wilson on December 19, 1913, contained the following clause (§ 6):

That the grantee is prohibited from ever

Table I

POWER UTILITY BOND ISSUES SUBMITTED TO VOTERS IN SAN FRANCISCO

Date	*Purpose*	*Amount*	*Yes*	*No*	*Outcome**
11- 8-27	Transmission Lines—extension from Newark..	$2,000,000	57,607	55,940	D
11- 6-28	Revenue Bonds—Charter Amendment, acquisition, construction, or extension of any utilities	No Limit	26,076	103,495	D
8-26-30	Acquisition Pac. G. & E. system	44,600,000	25,383	63,638	D
8-26-30	Acquisition Grt. Western Power system	18,945,000	25,256	63,387	D
8-26-30	Transmission Lines — Extension from Newark, etc.	3,525,000	25,788	61,972	D
8-26-30	Construction Red Mountain Bar Plant.....	1,045,000	26,001	61,422	D
11- 7-33	Red Mtn. Bar Plant, transmission line from Newark, building electric distribution system in San Francisco	6,308,000	71,746	73,010	D
5- 2-35	Revenue Bonds—Charter amendment, acquisition, construction, or extension of any of the utilities	No Limit	50,804	72,780	D
3- 9-37	Revenue Bonds—Charter amendment, electric generation, and distribution	50,000,000	65,762	78,101	D
5-19-39	Revenue Bonds—Charter amendment, generation, and distribution of hydroelectric power.....	55,000,000	50,283	123,118	D

*D—Defeated. General obligation bond issues require a two-thirds majority; revenue bonds accompanied by charter amendment need only a simple majority.

selling or letting to any corporation or individual, except a municipality or a municipal water district or irrigation district, the right to sell or sublet the water or the electric energy sold or given to it or him by the said grantee: *Provided,* that the rights hereby granted shall not be sold, assigned, or transferred to any private person, corporation, or association, and in case of any attempt to so sell, assign, transfer, or convey this grant shall revert to the government of the United States.

By 1925, the Moccasin power plant, housing the Hetch Hetchy generators, was ready to operate. The only outlet for the power was the Pacific Gas & Electric Co. Accordingly, a consignment, or "agency" contract, was agreed upon for disposing of this power.

It was the city's intention eventually to have its own distributing system; hence a cancellation clause provides for the termination of the contract on one day's notice.

Under this contract, effective August 14, 1925, the Pacific Gas & Electric Co. agreed to be "temporary distributor" of Hetch Hetchy power in behalf of the city, accepting the full output at a 75 per cent load factor. The contract is based on an assumed 24 per cent energy loss between the delivery of power at Newark and ultimate retail metering. The average energy rate received by the company in San Francisco at that time was 2.383 cents per kilowatt hour. The city receives, therefore, a split of 26.935 per cent of 2.383 cents per kilowatt hour for 76 per cent of the energy consigned to the company at Newark, and the company the remaining 73.065 per cent for acting as transmission and distributing agent from that point. The 2.383 cents per kilowatt-hour figure has been adjusted frequently since, but such revisions have been insignificant.

Prior to Secretary Ickes' time, this contract had never been approved nor disapproved by a Secretary of the Interior. It had been permitted to exist by sufferance. The city had asked the California Railroad Commission in 1924 to begin condemnation valuation studies of San Francisco electric distribution properties. This valuation was not completed until 1929. As can be seen from Table I, acquisition programs submitted to the voters in 1928 and 1930 were snowed under. A small bond issue calling for increased power plant facilities, a transmission line from Newark to San Francisco, and construction of an electric power distribution system in San Francisco was beaten by a small adverse majority vote in 1933 (a two-thirds majority was required).

Then came Secretary Ickes. In March, 1935, the Secretary notified San Francisco officials of his intention to conduct a hearing on the question of Raker Act violation. This hearing was held in May. In the same month, the San Francisco electorate turned down an unlimited revenue bond issue designed to put the city in the electric distribution business.

The Secretary's opinion was issued on August 24, 1935, and held that the contract with Pacific Gas & Electric Co. was a clear violation of § 6. Mr. Ickes pointed out that the city could conform to the Raker Act by obtaining its own distribution system.

Constant repudiation of this issue at the polls caused city officials to devise as many alternative plans as possible for meeting this problem. One plan, which seemed more feasible than the others, called for city acquisition of

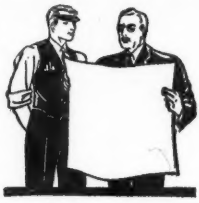


Table II

HETCH HETCHY POWER PRODUCTION

FISCAL YEAR 1938-1939

Generated	*Kw. Hr.*
Moccasin Power House	504,483,000
Early Intake Power House	27,122,600
	531,605,600
Disposition	
Consigned to Pacific G. & E. Co.	495,388,800
Used at Power Houses	770,600
Used at Mountain and Foothill Divisions	1,150,183
Lost and Unaccounted for	34,296,017
	531,605,600

enough distributing properties to absorb at peak demand Hetch Hetchy's capacity, with the city selling the balance of the power (about 55 per cent of the kilowatt-hour output) to Pacific Gas & Electric Co. under the existing contract. Secretary Ickes, in April, 1936, rejected this proposal.

This led to Plans 7 and 8, calling for purchase of Pacific Gas & Electric's San Francisco properties through revenue bond issues of $50,000,000 and $55,000,000, respectively. Plan 7 was defeated by a narrow margin in March, 1937. Plan 8 was turned down 2½ to 1 in May, 1939. (Table I.)

Following rejection of Plan 7, Secretary Ickes requested the Attorney General to take legal steps to enforce the Raker Act. The district court on June 28, 1938, sustained Secretary Ickes' position. This decision was reversed by the circuit court of appeals; but on April 22, 1940, the United States Supreme Court reversed the circuit court, and backed up the Secretary's contentions in every particular. Justice McReynolds dissented. The decision was based largely on a review of the intent of Congress at the time the act was passed, which clearly appeared to favor imposing public ownership on San Francisco.

BECAUSE of the large water storage in the Hetch Hetchy reservoir, the 80,000 kilowatts of generating capacity in the Moccasin plant can operate continuously on a 75 per cent load factor. This plant is capable of supplying between 45 per cent and 50 per cent of San Francisco's actual energy demand. The city has a load factor of about 43 per cent. Hetch Hetchy is able to fur-

nish about one-third of the city's peak demand.

Any city plan for taking over the distribution of electricity in San Francisco must look to supplementary sources of power, particularly peak load and standby power (relatively expensive forms of power). Pacific Gas & Electric is the only other available power source. Eventually, some power may be available from Shasta dam of the Central Valley project, but this structure will not be completed before 1944. In the meantime, there is the question of the amount of firm power which will be available at Shasta, and the method of its disposal.

By spending about $1,100,000, San Francisco could install a 20,000-kilowatt plant at Red Mountain Bar, capable of delivering about 125,000,000 kilowatt hours annually at a 75 per cent load factor. As this power, which is now running to waste, would bring in about $500,000 a year if sold at the same rate as Moccasin power, it seems likely that this economical plant will be installed when a solution is finally worked out.

Two other power plant sites could be developed in the Hetch Hetchy system, capable together of developing about 66,000 kilowatts of firm power. These two plants, at Early Intake and North mountain, would be relatively costly, however, and are not being actively considered. In fact, it is questionable whether steam plant power or purchased power would not be more economical than energy from these two possible plants.

Power generated and revenue produced by the Hetch Hetchy project are shown in Tables II and III.

It is generally believed that sufficient time exists before October 1st to work out a tentative leasing arrangement whereby the city actually will take over the private facilities in San Francisco and operate them with its own employees. While the details of such an agreement would be complicated, it would suffice for purposes of satisfying the Interior Department to work out broad terms along lines of policy. It remains to be seen just how far the company will be willing to go in drawing up such a lease, as it must consider the interests of its investors.

However, the company would participate in any future growth of San Francisco's power demand, inasmuch as the city would be forced to buy a large amount of its present power requirements from the company, and *all* of the demand increment representing future growth. Power demand in the city of San Francisco itself has not been expanding at the same rate as in the other portions of Pacific Gas & Electric territory, largely because the population growth trend within the city limits apparently has tapered off. Preliminary census reports show a 1940 population of 629,553 in the city and county of San Francisco, down slightly from 634,394 in 1930.

The lease arrangement, if consummated, would of necessity embody compensation to the company for purchased power, standby facilities, and transmission and step-down facilities between Newark and San Francisco. Table IV indicates that in the recent "leasing" agreement, rejected by Secretary Ickes, the city would have had to pay around $3,680,000 for purchased power, $700,000 for standby,

and $260,000 for transmission and step-down. Out of the $16,345,000 of annual revenues estimated under present rates and consumption (about 15 per cent of the company's combined revenues), the city would have cleared an estimated $2,423,000, or approximately the amount it now grosses from the sale of Hetch Hetchy power on a wholesale basis. This is after deducting $950,000 for local property taxes, $82,000 for city franchise taxes, and $930,000 for Federal and state taxes. It is difficult to foretell what the new lease negotiations will develop in the way of revenue to the city, after weighing in the tax factor.

To add to the difficulties of obtaining a lease agreement, the California Railroad Commission must approve any lease the company makes (although municipal utilities are free from commission jurisdiction). The railroad commission will be deeply interested in such a leasing contract, because it would tend to affect the company's rate base, earnings, and fair rate of return. This would have repercussions on future rate policies with respect to the company's remaining customers, particularly the high-cost rural customers, present or future.

As long as there is any indication that a solution to this problem can be worked out, it is likely that the court will grant further extensions of time before making the injunction effective.

In the event that no leasing arrangement satisfactory to Secretary Ickes can be agreed upon, another election on the issue of acquisition would almost certainly be held. It is understood that the city is currently studying the properties, and considering placing before the electorate a revenue bond issue ranging between $55,000,000 and $60,000,000. It would appear, however, that this would still leave the two parties quite far apart.

Table III

HETCH HETCHY POWER DIVISION—INCOME STATEMENT

CITY OF SAN FRANCISCO

	Fiscal Year Ended June 30, 1939	*Period Aug. 16, 1925 to June 30, 1939*
Power Revenues		
Moccasin Power House	$8,876,439	$110,255,881
Less Distribution Commission	6,555,310	80,748,743
	$2,321,129	$ 29,507,138
Water Supply for Construction	.....	604,988
Other Power Revenues	98,329	847,658
Total Power Revenues	$2,419,458	$30,959,784
Operating Deductions		
Operating Expenses	$252,271	$3,564,480
Depreciation	301,718	4,196,266
Taxes	4,076	56,868
Total Operating Deductions	$558,065	$7,817,614
Net Operating Income	$1,861,393	$23,142,170

The California Railroad Commission in its 1929 valuation of the properties, adjusted to mid-1930, set a price, including intangibles and severance damages, of $63,545,000, which was the size of the acquisition bond issue turned down at the polls in August, 1930. Certain properties were included in this valuation that may be excluded in present plans, but the fact remains that (1) the company was not altogether satisfied, from indications, with the $63,545,000 figure, and might have gone to court with it, and (2) additions, improvements, and extensions in the meantime probably have augmented this figure materially.

If such an election should carry, the city would proceed by instituting formal condemnation proceedings against the company. The law requires the California Railroad Commission to make a valuation of the properties. The ordinary procedure is to put the property through condemnation proceedings first, and submit a bond issue based on the commission's findings later. This is a long and detailed process. It took the commission over five years to value San Francisco properties before. The Sacramento valuation case, started after the approval of municipal ownership at the polls in November, 1934, still will not be completed for several months yet. It is generally believed that valuation proceedings of present San Francisco facilities would take from five to ten years. Following that, the company, if it felt the valuation unfair, would have recourse to the courts, meaning further long delay.

WHILE the 1929 valuation of company properties included substantial allowances for intangibles and severance damages, it is interesting to note that the present commission, having four new members out of the total membership of five, in two recent cases has been more liberal than the 1929 body. The Fresno valuation of 1936, and the Redwood City valuation of 1937 (voters of both cities turned municipal ownership down in 1937) added large sums to physical properties to derive "just compensation." In both findings, the railroad commission stated, "in valuing the properties and rights sought to be condemned, we will endeavor to fairly reflect the earning power of the business attached." In the Fresno Case, Commissioner W. J. Carr, member of the 1929 commission, arrived at a value 15 per cent below the figure set by the other four members.

Secretary Ickes has given as a third alternative the construction of a competing municipal system. This would represent sheer economic waste, and is not favored by Mr. Ickes. Nevertheless, this alternative may be put to the voters in some form in the event that another election is found necessary. Such a proposal would carry a revenue bond issue with it.

IT is doubtful, however, that even if a revenue bond issue were approved for the purpose of erecting a duplicating system, the bonds could be sold. It would be difficult to convince buyers of such bonds that, under competitive conditions, interest protection after expenses would be adequate. To be successful, such financing probably would have to come in the form of a general obligation issue. This would require a two-thirds majority approval

Table IV

ESTIMATED INCOME ACCOUNT OF CITY OF SAN FRANCISCO ARISING FROM PROPOSED LEASE OF ELECTRIC FACILITIES FROM PACIFIC GAS & ELECTRIC CO.*

Gross Municipal Revenue	$16,345,000
Expenses:	
Cost of Facilities and Depreciation	4,900,000
Purchased Power	3,680,000
Standby Charge	700,000
Transmission, Newark to City and Step-down	260,000
Operating, Maintenance, Commercial, and New Business	1,660,000
Pro-rata Administration and General Expense, Including Fixed Charge on Capital	640,000
Insurance and Casualty Reserve	35,000
Local Property Taxes	950,000
City Franchise Tax	82,000
Social Security Taxes	75,000
Federal & State Taxes (no Federal excise energy tax included)	930,000
Reserve for Uncollectibles	10,000
Total Expenses	$13,922,000
Net to City	2,423,000

* Prepared by the city of San Francisco to accompany the lease proposal memorandum to Secretary Ickes, submitted in July, 1940. This lease agreement was rejected by Secretary Ickes as not conforming to the Raker Act.

at the polls, generally viewed as impossible to obtain (only a simple majority is required for a revenue issue). Moreover, the debt limit on general obligation bonds is 12 per cent of the city's assessed valuation, which at present leaves a debt limit margin of about $69,000,000 of additional general obligation bonds. A large issue might be considered unsound from the standpoint of future municipal finance.

What is the attitude and temperament of the San Francisco electorate? San Francisco has a heritage of private initiative, independence of thought and action, and financial conservatism extending back to the gold rush days. The voters have always been reluctant to approve bond issues, particularly large ones, when not absolutely vital. San Francisco citizens resent pressure.

It is a foregone conclusion that any bond election in any way connected with this issue will propose the issuance of revenue bonds, requiring only a simple majority for approval. This would take the form of a charter amendment, requiring ratification by

the California state legislature. Can a simple majority be obtained?

An examination of San Francisco's election record on utility bond issues may give some clue to future election results. The six Hetch Hetchy water supply bond issues, voted on from 1908 to 1933, and totaling $89,600,000, were in every instance overwhelmingly approved. These bonds were not controversial, and were regarded as necessary to the future of San Francisco.

It was not easy to induce the voters to purchase the Spring Valley Water Co. system, however, as may be seen from Table V (two-thirds majority necessary). This acquisition, involving the water distribution system, was an important segment in the Hetch Hetchy plan, but eighteen years were required to obtain approval at the polls.

Table I shows the record of power bond issues, defeated at seven different elections. Of collateral interest are the elections since 1913 on municipal railway purchases, extensions, and improvements (Table IV). One-third of the city's riders use the municipal line, and two-thirds use the Market Street Railway Co. facilities. The transit situation offers an acute problem of deficient coördination and antiquated facilities. Yet, the voters seem overwhelmingly opposed to bonding the city to improve this situation.

Table V

WATER DISTRIBUTION AND MUNICIPAL RAILWAY BOND ISSUES SUBMITTED TO VOTERS IN SAN FRANCISCO

Date	*Purpose*	*Amount*	*Yes*	*No*	*Outcome**
	SPRING VALLEY WATER COMPANY PURCHASE				
1-14-10	Acquisition Spring Valley Water Co.....	$35,000,000	22,068	11,722	D
4-20-15	Acquisition Spring Valley Water Co.....	34,500,000	39,951	33,455	D
3- 8-21	Acquisition Spring Valley Water Co.....	38,000,000	43,073	30,992	D
6-14-27	Acquisition Spring Valley Water Co.....	40,000,000	41,463	28,611	D
5- 1-28	Acquisition Spring Valley Water Co.....	41,000,000	82,490	21,175	C
	WATER DEPARTMENT IMPROVEMENT ISSUES				
11- 8-32	Revenue Bonds—Water Department Improvements	5,000,000	66,532	89,220	D
11- 7-33	Water Distribution	12,095,000	105,279	42,878	C
	MUNICIPAL RAILWAY				
11- 3-25	Purchase Market St. Railway	36,000,000	12,435	87,315	D
6-14-27	Extensions Municipal Line	4,700,000	44,412	25,791	D
11- 8-27	Extensions Municipal Line	4,600,000	68,484	49,965	D
11- 7-33	Extensions Municipal Line	63,000	76,438	68,330	D
11- 2-37	Rapid Transit—Payable out of income.....	49,250,000	68,834	95,246	D
9-27-38	Market Street Ry. Co. Purchase	24,480,000	52,680	93,979	D
11- 8-38	Market Street Ry. Co. Purchase (Declaration of Policy)	5,000,000	49,932	128,320	D
11- 8-38	Passenger Bus Purchases (Declaration of Policy)	9,000,000	49,948	128,466	D

* D—Defeated.
C—Carried.
General obligation bond issues require a two-thirds majority; revenue bonds accompanied by a charter amendment need only a simple majority.

WHILE the outcome of any possible future vote cannot be predicted, the weight of past evidence suggests that the trend of voter opinion is away from public ownership action. This trend was clearly shown in the vote on this issue in May, 1939, as contrasted with the 1937 vote (Table I).

San Franciscans in the past have shown that they don't relish threats or high pressure. Apparently, neither do the people in Oregon, particularly in Portland, which defeated a utility district proposal in May, 1940, by 68,973 to 30,278. All the weight of the Bonneville Administration appeared to be behind this election, while Senator Norris of Nebraska is reported to have sent 40,000 or more franked envelopes to Portland voters containing a radio speech of Oregon State Senator Kenin, which Senator Norris had managed to have published in the *Congressional Record*. Incidentally, another vote on this issue will be held in Portland this November.

Another factor is the fact that Pacific Gas & Electric has about 95,800 stockholders, 73 per cent of whom are in California.

On the other hand, if the government can hold the threat of an injunction and possible recapture of Hetch Hetchy power facilities over the voters' heads, taxpayers may be influenced by the alternative 28-cent increase in their city tax rate (which was $3.937 in the 1939-40 fiscal year).

IT might be doubted that the Federal government would ever dare shut off Hetch Hetchy power, or recapture it, because of unpleasant political complications. True, Hetch Hetchy, if confiscated, would fit splendidly into any distribution scheme for Shasta dam power, because Hetch Hetchy power is firm power, and could round off the peaks and canyons of Shasta's power curve very nicely. But, after all, the city has flooded only 3,500 acres of mountain country in federally owned Yosemite park. For the right to use the water and power of this area, the city has spent over $100,000,000 in improvements, including aqueduct line, and expended $1,250,000 on scenic roads in this recreation region. Reservoirs have been created which add to the park's beauty and provide flood protection in the valley below. Into the bargain, the city pays the United States $30,000 a year.

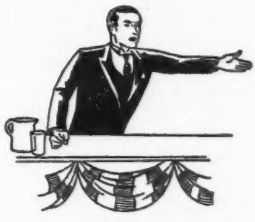
Unless § 6 of the Raker Act is repealed or modified, the city will be subject to the interpretive whims of each successive Secretary of the Interior on any scheme short of actual acquisition of distribution facilities.

THERE may even be a political angle of national interest injected into the current presidential campaign if the bitterness of San Francisco against Washington should increase before November. The situation recalls the fatal error made by Republican Candidate Hughes in 1916 in snubbing Senator Johnson and throwing California to Woodrow Wilson.

Observers have generally placed California safely in the Roosevelt column. But if San Francisco gets mad enough at Secretary Ickes, the state could become fighting ground for Willkie. Conceivably, history could repeat itself (in reverse for the Democrats), with Secretary Ickes having the doubtful honor of pulling the decisive "bone-head" play.

THE HETCH HETCHY TIE-UP

Neither Boulder dam, TVA, Bonneville, nor U. S. Bureau of Reclamation projects forbid the sale of power to private corporations or individuals, although, with the exception of Boulder dam, the law requires that among those applying for power, preference be given to public agencies. Hetch Hetchy is just another instance of the jumbled nature of the administrative authority and the legislation under which Federal power is dispensed.



What Would Confucius Say about This?

BACK in 1907, when Yoshihide Furushima was a gay blade of twenty-two, just out of Nihon University, he became interested in the subject of telephones, which then were relatively unknown in Japan. After studying the problem carefully, Furushima convinced himself that telephones were not a temporary fad, but were here to stay.

Consequently, he took 15 yen (about 24 cents currently) from his saved earnings as a struggling lawyer and deposited it with the communications ministry along with an application for installation of a telephone. He then sat back and waited. Furushima has been waiting ever since. No phone has been installed in his home and Furushima still has to send his own messenger scurrying around Tokyo when he wants to communicate with friends.

Last March, Furushima's patience was finally worn thin after thirty-three years of waiting. He rose in the Diet, to which he had been elected recently, and denounced the communications ministry in no uncertain terms. He told the Diet:

"There are no less than 100,000 applications for telephones that have not been yet met by the ministry of communications after taking 15 yen as application fees. This amounts to 1,500,000 yen that the government has taken without meeting its obligations for over thirty years. My patience is exhausted. If this were a private company I should long ago have sued on a swindle and embezzlement charge. If my 15 yen had been placed in the bank in 1907, I should now be a rich man on the accrued interest.

"In 1907 I was a young man in the vigor of youth, just starting out in life. Now I am fifty-four years old, white-haired and creaking in the joints. If I have to wait any longer for this elusive telephone I might as well mention it in my will in the faint hope that future generations of Furushima will get some benefit from it."

Wire and Wireless Communication

THE American Telephone and Telegraph Company has enlarged its construction program for its long lines department since earlier this year as a result of the increasing tempo of preparedness activity, it was announced recently. Whereas the department had a budget of $18,000,000 early this year, modifications and additional equipment will raise the total to around $21,000,000 against $12,000,000 spent in 1939.

Officials pointed out that long-distance traffic of the Bell system was now running three times greater than the peak business of the World War. Moreover, the work providing new facilities for key centers will be based upon an estimate of the part which each major geographical district of the country will play in the defense program. In Washington, the need for the building up of inland areas for strategic purposes has been frequently expressed, while Republican Candidate Wendell L. Willkie has voiced a demand for diversification of manufacturing plants in the interests of defense.

Plans to meet the present emergency began almost a year ago, according to the AT&T. With the outbreak of war in Europe, 20-year-old records were taken from the files and reviewed to determine the routes over which long-distance traffic reached its greatest concentration during preparation for the World War.

In the light of present-day developments and taking into consideration what happened during the last war, plans were made for increasing the capacity along certain routes which might be expected to carry an abnormally heavy load, such as routes out of Washington and from large centers of industry, railheads, seaports, and troop concentration points.

AMONG the most important projects in preparation today is the laying of a new underground cable between Baltimore and Washington. Following a different route from the other lines, this cable will provide another valuable path along the vital Washington-New York route. The project will cost $1,000,000 and it is expected that the cable will be in service the end of this year.

The Baltimore-Washington cable is of unusually large capacity, providing facilities for many additional telephone and telegraph circuits, telephoto wires, and channels for broadcasting programs.

The use of an entirely different path for the new cable is in pursuance of a practice which has been a special feature of all long lines engineering and construction programs for the past twenty years. This has to do with the establishment of alternate routes between the country's largest cities—the purpose being to insure maintenance of communications in almost any contingency.

Along the eastern seaboard route, so vital in national defense measures, communication facilities will be supplemented this year by important additions on various links all the way from Boston

to Florida. "Carrier" systems will provide new channels between Boston and New York and between New York and southern Florida.

Facilities will likewise be supplemented on a number of other main routes. Additional carriers will be installed along the fourth transcontinental, from Oklahoma City to Los Angeles. Between Stevens Point, Wisconsin, and Minneapolis a coaxial cable, the first commercial installation, will form a most important link out of Chicago with the populous and industrially important Minneapolis-St. Paul area.

In addition to establishing numerous alternate routes between key cities, the company will pursue a policy to further safeguard its major routes, wherever economically feasible, by putting the cables underground. The obvious benefit of this is to reduce the probability of damage, either by natural forces or human agency.

* * * *

At the outbreak of the war in Europe, military restrictions shut off all private and commercial telephone service with Great Britain and continental Europe. Great Britain and France, however, continued to accept government and press calls. Within ten days after the outbreak of war, however, general telephone service to continental Europe, except France, was restored over two new circuits to Europe. A New York-Rome circuit, already under construction, was rushed to completion. In addition, arrangements were made with the Netherlands for a temporary circuit between New York and Amsterdam. Although the establishment of such circuits usually requires many months, this channel was in operation within a week.

While the Amsterdam circuit is no longer operating, two other circuits to continental Europe recently have been set up, so that today Europe can be reached directly by circuits to Rome, Berne, and Berlin, according to Bell system engineers. In some cases, this gives two different routes to a country.

At present Bell system overseas telephone service with Europe includes Bulgaria, Finland, Lithuania, Portugal, Rumania, Sweden, Switzerland, and Yugoslavia. As yet, service has not been restored to France, Belgium, Holland, Norway, Denmark, and Spain. The New York-Paris circuit still is shut down. In the case of Great Britain, Rumania, and Italy, the service is limited to government and press calls. Virtually all countries permit broadcasting by American commentators and newspaper men to the American networks over transatlantic telephone circuits.

Incidentally, from Lisbon, Portugal, on August 23rd came a dispatch to the effect that the International Telephone & Telegraph Company had been given back its Spanish properties by the Franco government. The company owns $125,000,000 worth of properties in Spain, controlled by American management.

Formal announcement that military intervention in the company's control has ceased will be delayed until a general meeting of shareholders is held, it was stated, but American executives and technicians are again directing operations.

* * * *

In order to establish the citizenship status of employees of cable and telegraph companies handling international communications, the Federal Communications Commission is enlisting the coöperation of such companies in having these workers fill out a jointly compiled questionnaire and furnish photographs and fingerprint records. This information is akin to that required of commercial and amateur radio operators in connection with the coördinated national defense program.

Proof of citizenship and accompanying identification are not desired of all communication company employees, but only of those who, in the course of their duties, handle international messages or have access to information passing over international circuits. The need for such data was mutually agreed in recent conferences between representatives of the

companies and the Federal commission.

It is estimated that about 30,000 employees are affected. Companies concerned are Commercial Pacific Cable Company, Commercial Cable Company, All America Cables and Radio, Inc., Postal Telegraph - Cable Company, Western Union Telegraph Company, American Telephone and Telegraph Company, Mackay Radio & Telegraph Company, Tropical Radio Telegraph Company, and Radio Corporation of America.

As a result of consultation with these companies, special forms have been worked out for the purpose—FCC Form No. 737, "Questionnaire for Employees of Communications Companies"—and fingerprint and photograph records on FCC Form 738.

These forms will be supplied in number to each company to take care of the necessary personnel. The companies have indicated that they will assist their respective employees to execute the forms with the least possible inconvenience. In certain cases the local Federal Communications Commission office will send men to offer facilities and other aid.

As in the case of commercial and amateur radio operators, forms will be mailed to the commission's Washington offices for permanent record. However, in the case of communications company employees the supervision of filling out the forms and mailing them to the commission will be under company direction, without direct contact between the individual employee and the commission.

This extension of proof-of-citizenship requirements is necessary for effective policing of communications in the present emergency.

The National Council on Freedom from Censorship, an affiliate of the American Civil Liberties Union, on August 25th urged the Federal Communications Commission to promulgate a regulation requiring radio stations to have recordings made of all foreign language broadcasts in this country.

Quincy Howe, chairman of the council, in a letter to T. A. M. Craven of the FCC, pointed out that his organization disapproved the discussion of controversial matters on commercial programs. Mr. Howe contended such programs, as under the National Association of Broadcasters' code, should be handled on sustaining time with opportunity of discussion of other views.

He requested that hearings be held by the FCC to ascertain the advisability and practicability of required transcriptions of foreign language broadcasts.

* * * *

Senator Tobey (R.) of New Hampshire on August 23rd said he had received information that "some members of the Federal Communications Commission have in the past received perquisites, favors, or gifts" from broadcasters.

He made public a letter to members of the commission inquiring whether they had received such favors and at the same time introduced a resolution calling for a Senate investigation of the FCC's administration of the Communications Act and of possible monopoly in the radio equipment industry.

In his letter, Senator Tobey said that "in connection with the hearing pending before the Interstate Commerce Committee regarding radio matters there has come to me information that some members of the Federal Communications Commission have in the past received perquisites, gifts, favors, or emoluments of one kind or another from either a radio station, one or more of the broadcasting companies or systems, or RCA (Radio Corporation of America), or from officials of the foregoing, these sometimes taking the form of expenses being paid to different places, sometimes gifts of radio or television instruments, and other things."

Tobey's resolution proposed an investigation of the manner in which FCC licensees have exercised their license privileges, contracts by licensees and broadcasting networks, and any attempts made by radio companies or employees to "unduly influence any public official in the exercise of his duties with respect

to any matter pertaining to radio."

On August 23rd, the Senate Interstate Commerce Committee, which has been holding an inquiry touching on RCA activities and other subjects, received conflicting statements as to the origin of a document criticizing RCA. The witnesses were J. Austin Smith, New York financial analyst, and Patrick Powers, retired New York motion picture executive.

Smith had testified previously that Powers hired him in 1936 to make an analysis of RCA's recapitalization plan and annual statements and literature and submit a "fighting report" which would "tend to embarrass the corporation." The witness said he understood Powers wanted "to establish a connection with the radio corporation or one of its subsidiaries, primarily RKO, some business connection that would give him prestige in the motion picture industry."

This was vigorously denied by Powers, who said Smith had suggested getting out the report preliminary to organizing a stockholders' committee and "I merely agreed to finance it."

Smith testified that Powers furnished much of the data for the report but Powers asserted he never read the report and never gave Smith any data for it except annual reports and statements of RCA he had in his files.

* * * *

As a result of negotiations initiated by the state public service commission, the New York Telephone Company would file new tariff schedules with the commission which would bring its intrastate toll charges more in line with the interstate rates charged by the American Telephone and Telegraph Company within the state. The effect of the new filing, according to Commissioner Neal Brewster, who carried on the negotiations with the company, will be a reduction of approximately $706,000 in the company's revenues from toll service.

The reduction will affect mileage service of 40 miles and over. The savings will amount to from 5 cents to 15 cents per call, depending upon the mileage.

USERS of telephones in the metropolitan area of Los Angeles will be saved a total of $275,000 annually through the extended and message unit service inaugurated by the Southern California Telephone Company.

The amount of the savings was announced last month through the office of Ray L. Riley, chairman of the state railroad commission, who said that the new rate would become effective in September.

At the same time Riley disclosed that residents of the metropolitan area of San Diego would be saved an amount estimated at $30,000 annually through the adjustment of rates on 2-party lines in several places, these same rates to become effective in Coronado and other points next year.

The new rate set-up in the Los Angeles area was said to be the culmination of a $1,600,000-savings program which was mapped out through the approval of the railroad commission some time ago.

Extended and unit services are now effective in the El Segundo, San Pedro, Lomita, and Torrance sections of the Southern California Telephone Company and the Covina, Redondo, Malibu, and Long Beach exchanges of the Associated Telephone Company, and the Whittier branches of the Consolidated Telephone Company.

* * * *

THE Federal Communications Commission, on its own motion, recently suspended for three months, pending hearing on October 1st, a new tariff of the Pacific Telephone & Telegraph Company proposing to increase the minimum guaranty for teletypewriter exchange service within certain areas of the West Coast Telephone Company of California from $10 to $30 a month. The tariff was to have gone into effect September 1st.

Since the $10 monthly minimum guaranty now prevails throughout the United States, the commission was said to feel that public hearings should be held before permitting a higher minimum to be charged in one particular section of the country.

Financial News and Comment

By OWEN ELY

United Gas Improvement

UNITED Gas Improvement, one of the nine companies served with "show cause" orders early this year by the SEC, is the oldest utility holding organization in the United States, having been organized fifty-five years ago. The company was originally an engineering and construction enterprise, later entering the investment and management field. The system ranks among the leading utilities in size, the 1939 balance sheet showing total assets of $837,503,972 (which excludes the leased property, Philadelphia Gas Works).

The accompanying table indicates the estimated liquidating value of UGI investments, the share value for subsidiaries being obtained by applying a multiplier to the 1939 earnings. About 87 per cent of the resulting appraised value of its holdings is concentrated in three issues:

	Millions	*Per Cent*
Philadelphia Electric	$192	58%
Public Service of N. J.	72	22
Conn. Light & Power	23	7
Misc. subsidiaries	20	6
All other investments	25	7
Total	$332	100%

Obviously, the system is in a very strong position so far as the geographic phase of § 11 is concerned. About 62 per cent of the system investments (as measured by the appraised value) is in Pennsylvania and 22 per cent in the adjoining state of New Jersey. Connecticut, in which 7 per cent of the system is located, may not technically be an adjoining state since a corner of New York state intervenes between it and New Jersey. The balance of the system, about 6 per cent, is largely in Delaware. (Delaware Electric Power properties are in Delaware and Pennsylvania.) The investment in Midland United (in receivership) is probably worthless, and in any event UGI shares the stock control with Commonwealth Edison, Peoples Gas, and Middle West. The subholding company, Commonwealth Utilities, whose properties are scattered through six middle western states, has total assets of only about $9,000,000; and UGI's investment is given a value in our table of only one-fifth of one per cent of the total.

UGI could, therefore, lose all its system investments outside of Philadelphia, New Jersey, and Connecticut without seriously affecting its set-up; and either the Jersey or Connecticut equities, concentrated in two large companies, should be easily salable if necessary. The investments in Commonwealth & Southern, Kansas City Gas, Niagara Hudson, etc., being less than 10 per cent of the voting stock in each case, are not affected by § 11.

As indicated in the table, UGI's total investments are given an estimated liquidating value of about $332,000,000. (By coincidence this figure is almost exactly the same as the total shown in the balance sheet, where investments are carried "at cost or less"). Adding net current assets of $3,930,000 gives a total "liquidating value" of about $336,000,000, and after deducting the preferred stock at $100 per share (to which it is entitled in liquidation) $260,000,000 remains available for common stockholders, or approximately $11 per share. This compares with the current market

value around 12 (approximate range this year 15-10).

Our estimate of liquidating value is probably ultra-conservative. The company obtains total dividend income equivalent to over 8¾ per cent on the appraised value of its investments, whereas UGI itself is currently selling to yield under 8½ per cent. Had the share valuations for Philadelphia Electric, Connecticut Light & Power, and Consumers Gas been based on the current market value for the relatively small amounts of minority stock outstanding, the estimated liquidating value of UGI would have been raised substantially, as indicated by the following comparisons:

	Assigned Value	*Approx. Market Value*
Philadelphia Electric	18¾	33
Connecticut Light & Power	32	56½
Consumers Gas	18	28½

Appraised values were derived by multiplying 1939 share earnings by 10 (except for smaller companies where lower figures were used). The reason this multiple was used for Philadelphia Electric instead of 12—which would conform more nearly to the average ratio for large independent operating companies—was the company's low ratio of depreciation and maintenance to revenues (about 12.9 per cent—for comparison with other companies see table on page 358). If this ratio were raised to 16 per cent, share earnings would be reduced by about 11 per cent; and if raised to 20 per cent, earnings would be cut about 26 per cent. Because of the SEC policy favoring heavier depreciation charges it is therefore deemed logical to apply a somewhat lower-than-average earnings multiple.

UGI's earnings and dividend record has been one of remarkable stability, reflecting the soundness of its principal

ESTIMATED LIQUIDATING VALUE OF PRINCIPAL UGI INVESTMENTS

	Est. Share Value	*Total Value (Millions)*		*Dividends Recd. 1939 (Millions)*	
Subsidiaries (Consolidated Statement)					
10,239,344 shs. Phila. Electric Co.	18¾*	192.0		18.4	
701,253 shs. Conn. Lt. & Power	32*	22.5		2.1	
60,375 shs. Allentown-Bethlehem Gas	33	2.0		.2	
291,900 shs. Commonwealth Util. A & B	6½	1.9		.2	
140,085 shs. Consumers Gas Co.	18*	2.5		.2	
900,000 shs. Delaware Elec. Power	8	7.2		.7	
50 shs. Philadelphia Gas Works	..	..		.2	
39,375 shs. Erie County Electric	100	3.9		.5	
Other companies	..	3.0	235.0	.2	22.7
Possible Subsidiary (as defined in Utility Act)					
2,017,490 shs. Public Serv. N. J.	35	70.7		5.0	
10,000 shs. Public Serv. N. J. 8% Pfd.	156	1.6	72.3	.1	5.1
Other Investments					
940,246 shs. Commonwealth & Southern	1¼	1.1		..	
64,253 shs. Commonwealth & Southern Pfd. ..	60	3.8		.2	
33,401 shs. Kansas City Gas 1st Pfd.	100	3.3		.2	
15,527 shs. Kansas City Gas 2nd Pfd.	60	.9		.1	
756,596 shs. Niagara Hudson Power	4½	3.4		..	
40,420 shs. Niagara Hudson Power 1st Pfd. ..	82	3.3		.2	
35,310 shs. United Illuminating	47	1.7		.2	
75,437 shs. United Illuminating 2nd Pfd.	68	5.1		.4	
Other companies	..	2.3	24.9	.1	1.4
Total			332.2		29.2

*Market value of minority stock is considerably higher (see comment in text).

operating subsidiaries and the simple system set-up so far as leading subsidiaries are concerned. Dividends on the common stock have been regularly paid for fifty-five years and the present $1 rate has prevailed since 1935. While the dividend has not been covered with much margin in recent years (earnings in 1939 were $1.07 a share on a consolidated basis and 98 cents for the parent company), the dividend policy has not depleted the system's cash and current position, which appear ample.

Summarizing, while the system may face a few minor adjustments necessary to conform to SEC requirements under § 11, stockholders apparently need have no great concern over the company's future.

Increasing Hydro Output a Favorable Earnings Factor

THE ability of most large utility systems to maintain generally favorable earnings statements in the first few months of 1940, despite the sharp drop in industrial activity, was probably due largely to two factors—recovery from drought conditions and the abnormal demand for natural gas for heating purposes. Water-power output rose sharply during February and March, compared with an abrupt decline in fuel-generated power. The trend was reversed in April and May but water-power generation is still substantially in excess of last year and will doubtless remain so for the balance of the year unless a new drought of widespread proportions is encountered.

The utilities have also been favored thus far by relatively low copper and coal prices. The U. S. Bureau of Labor Statistics index of bituminous coal prices has thus far in 1940 averaged about the same as or slightly below the corresponding level last year. But this situation may be somewhat altered over the balance of the year, as the new minimum prices announced by the Bituminous Coal Division of the Department of Labor go into effect, although the utilities are hopeful that they can avoid much increased cost by switching sizes and grades. (Electric power companies can change more readily than gas producers.)

Considering the recent record high for weekly electric output and the outlook for well-sustained business activity in the balance of the year, the earnings outlook for the utilities remains favorable. But with the current international situation it is impossible to make definite forecasts except with the usual reservations regarding war and defense developments.

Many industrial companies, particularly in aviation, shipbuilding and similar lines, are setting up special reserves for excess-profit taxes for the entire calendar year, or are calling attention to the fact that first half earnings are reported prior to such tax adjustments, although legislation has not yet been enacted by Congress. Fortunately the utilities, as a group, have relatively little to fear from the new tax. Their earnings will not show the sensational gains enjoyed by some industrial companies active in defense work. The option of applying a minimum average return on invested capital as a tax base is also a protective feature, since most companies are held to a 6-7 per cent return by the state commissions. This is fortunate, since they are already taxed much more highly than most industries, and the rise in the normal tax from 19 per cent to 20.9 per cent will affect 1940 earnings to some extent.

The New Federal Reserve Index

POSSIBLY because of criticisms early this year that the Federal Reserve Index gave undue weighting to steel operations, with resulting wide fluctuations, the index has now been officially revised for the period 1923-40. The new series is compared with the old in the accompanying chart (the years 1919-22, unrevised, are "chained onto" the new series). It is interesting to note that on the new basis, business activity is now substantially higher than at the 1929 peak; also, the reaction early this year

was much less severe than as measured by the old index, and a greater proportion of the decline has been recovered in the past several months.

The new index is derived from 81 individual series distributed among 16 manufacturing and 2 mining groups. About one-quarter of the series is new, and another one-quarter or more have been substantially revised. The base period (100 per cent) has been shifted from 1923-5 to 1935-9. Weights for the individual series were derived from census data, 1937 weights being used for the last decade and 1923 weights for previous years. Seasonal adjustment bases were completely revised.

The greater stability of the new index seems largely due to an increase in the coverage of nondurable goods industries, as well as the inclusion of such new series as furniture and machinery. In some cases where statistics of shipments or deliveries are used to reflect production, a 3-month moving average has been adopted; while in a few cases, such as shipbuilding, the highly erratic figures for completed units have been superseded by production estimates. Also the sharp December peaks which featured the old index in recent years have been reduced or eliminated by revising the seasonal adjustment.

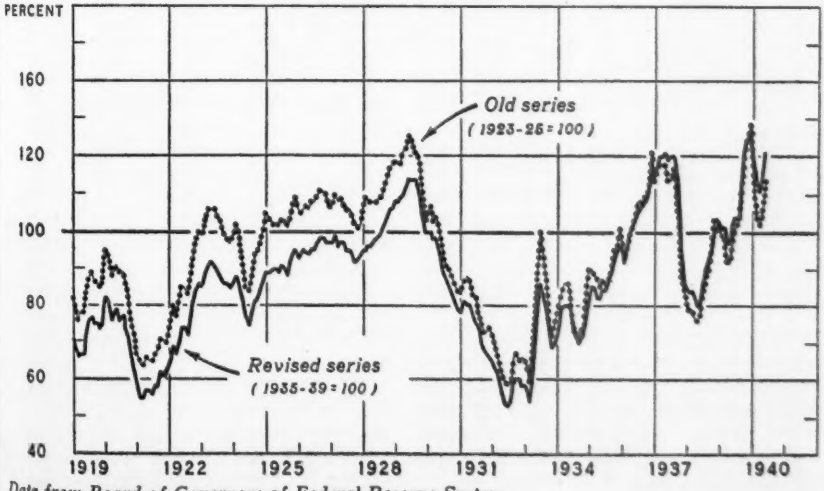
Depreciation-maintenance Ratios

THE public utilities division of the SEC recently issued a valuable study of the financial statistics of 188 operating subsidiaries of utility holding companies for the decade 1930-39. (See also p. 372.) The report shows graphically the trend of net income (both as published, and as reported for income tax purposes) over the decade. It is regrettable that the information could not be made uniform to include independent operating companies as well, together with statistical totals and averages for the entire industry.

Much of the data is already available

INDUSTRIAL PRODUCTION IN THE UNITED STATES, INDEX NUMBERS, 1919-40

(ADJUSTED FOR SEASONAL VARIATION)



Data from Board of Governors of Federal Reserve System
U. S. Department of Agriculture

RATIOS OF DEPRECIATION AND MAINTENANCE TO REVENUES FOR PRINCIPAL UTILITY OPERATING COMPANIES, BY SYSTEMS, 1939

	Depr. (Pub. Amt.)	Depr. (Inc. Tax)	Main-tenance	Depr. and Maint.
Amer. Gas & Elec.				
Appal. Elec. Power ..	13.76	15.51*	4.72	18.48
Atl. City Elec.	16.60	14.93*	6.61	23.21
Ind. & Mich. Elec.	12.98	14.53*	5.09	18.07
Ind. Gen. Service ..	10.18	9.59*	4.22	14.40
Ky. & W. Va. Pow. ..	8.86	11.13*	4.48	13.34
Ohio Power Co.	13.29	14.11*	5.66	18.95
Scranton Elec.	13.20	14.30*	6.61	19.81
Wheeling Elec.	9.03	7.99*	3.29	12.32
Amer. Power & Light				
Cent. Ariz. Lt. & Pr.	9.56	10.16	2.94	12.50
Florida Pow. & Lt. ..	9.97	17.47*	5.67	15.64
Kansas Gas & Elec. ..	10.45	15.74*	4.97	15.42
Minn. Pow. & Lt.	8.93	14.66*	4.32	13.25
Montana Power	9.12	12.67	4.75	13.87
Nebraska Power	7.51	12.29*	2.86	10.37
Northwestn. Elec.	6.27	11.43*	3.02	9.29
Pacific Pow. & Lt.	11.20	14.63*	3.44	14.64
Port. Gas & Coke	8.02	15.83*	4.61	12.63
Texas Elec. Serv.	11.73	14.98*	4.36	16.09
Texas Pow. & Lt.	9.46	17.67*	5.40	14.86
Wash. Water Power..	10.31	14.35*	4.46	14.77
Amer. Water Works & Elec.				
Monon. W. Penn Pub. Service Co. & sub.	9.70	12.86†	7.62	17.32
Potomac Ed. & sub. ..	20.28	13.75†	5.21	25.49
W. Penn Pr. & sub...	8.79	13.96†	8.14	16.93
Ark. Natural Gas				
Ark. La. Gas	23.06	..	3.55	26.61
Assoc. Gas & Elec.				
East. Shore Pub. Service & sub.	13.14	13.94*	4.69	17.83
Flor. Pr. & sub.	8.02	16.60*	6.92	14.94
Flor. Pub. Serv. ...	15.16	22.67*	7.08	22.24
Ky.-Tenn. Lt. & Pr.	9.65	5.76*	7.10	16.75
Met. Edison	9.72	12.22*	6.08	15.80
N. J. Pow. & Lt.	11.13	12.28*	6.07	17.20
N. Y. State El. & Gas	7.77	..	5.22	12.99
Nor. Penn. Power ...	8.27	9.29*	3.71	11.98
Pa. Edison & sub. ..	8.09	13.26*	8.81	16.90
Pa. Elec. & sub.	8.75	10.81*	5.35	14.10
Roch. Gas & Elec. ..	9.49	11.71*	7.91	17.40
So. Car. Elec. & Gas	14.55	17.32*	5.99	20.54
S. I. Edison	9.10	9.70*	6.55	15.65
Tide Water Power ..	10.12	9.34*	6.04	16.16
Va. Pub. Serv. & sub.	11.62	11.54*	5.27	16.89
Cities Ser. Pr. & Lt.				
Empire Dist. Elec. ..	14.67	18.03*	4.86	19.53
Ohio Pub. Serv.	7.46	N.A.	4.41	11.87
Pub. Serv. of Colo. & sub.	8.14	10.46*	3.65	11.79
St. Jos. Ry. L. H. & Pr.	11.69	11.43*	4.42	16.11
Sprfld. Gas & El. ...	8.35	8.57*	4.62	12.97
Toledo Edison	8.33	N.A.	6.39	14.72
Columbia Gas & Elec.				
Cinn. Gas. & Elec. ..	12.81	..	7.13	19.94
Dayton Pow. & Lt. ..	8.14	..	4.98	13.12
Commonwealth & South.				
Ala. Pow. & sub.	11.89	14.82*	4.56	16.45
Central Ill. Lt.	11.84	11.33*	6.05	17.89
Consumers Power ...	11.55	N.A.	5.66	17.21
Ga. Pow. & sub.	10.30	13.39*	6.43	16.73
Mississ. Power.	7.65	N.A.	4.96	12.61
Ohio Edison	12.98	14.52*	6.21	19.19
Penn. Power	9.45	10.58*	4.56	14.01
So. Car. Power	10.31	11.26*	5.34	15.65
So. Ind. Gas & El. ..	13.09	12.55*	5.33	18.42
Community Gas & Power				
Birmingham Gas	6.88	18.81*	3.90	10.78
Minn. Gas Light	5.00	8.71*	4.93	9.93
Community Power & Lt.				
S. W. Pub. Ser. & sub.	9.09	8.20*	2.21	11.30
Tex.-N. M. Util.	10.61	14.71*	3.86	14.47
Consol. Elec. & Gas				
Atlanta Gas Lt.	4.73	5.02*	1.97	6.70
Cent. Ill. El. & Gas ..	10.14	10.61*	6.66	16.80
Cent. Ind. Gas.	4.37	4.37*	2.83	7.20
East. Util. Associates				
Blackstone Val. Gas & El. & sub.	9.07	10.50*	5.27	14.34
Electric Power & Lt.				
Ark. Power & Light..	13.16	13.85	4.66	17.82
Dallas Pow. & Lt. ..	6.89	15.14*	5.38	12.27
Idaho Power	7.75	12.30*	4.57	12.32
La. Power & Light ..	10.06	10.24*	4.52	14.58
Mississ. Pow. & Lt...	10.33	N.A.	4.85	15.18
N. Orl. Pub. Serv. ..	12.39	12.63*	7.28	19.67
United Gas & sub. ..	21.63	..	2.65	24.28
Utah Pr. & Lt. & sub.	8.07	14.29*	7.03	15.10
Engineers Pub. Serv.				
El Paso Elec. (Tex.)	12.54	15.64*	6.06	18.60
Gulf States Util.	13.61	16.45*	5.51	19.12
Pug. Snd. Pr. & Lt. & sub.	8.44	14.87*	5.95	14.39
Sav. Elec. & Power ..	13.96	17.55*	5.77	19.73
Va. Elec. & Power ..	11.58	12.79*	7.72	19.30
West. Pub. Serv. & sub.	12.13	16.16*	5.82	17.95
Federal Water Serv.				
South. Nat. Gas & sub.	14.21	..	1.88	16.09
Middle West				
Cent. Ill. Pub. Serv.	15.34	14.86*	5.72	21.06
Central Power	10.25	14.31†	7.93	18.18
Kansas El. Power ..	11.14	10.95†	4.34	15.48
Ky. Util. & sub.	11.97	12.43†	5.42	17.39
Lake Sup. Dis. Pwr.	12.86	13.22†	5.86	18.72
Nthwn. Pub. Serv. ..	11.48	13.01†	5.19	16.67
Pub. Serv. of Okla. ..	12.20	17.22†	4.22	16.42
S. W. Gas & El. & sub.	11.37	13.31†	4.51	15.88
S. W. Lt. & P. & sub.	12.81	14.83†	5.40	18.21
West Tex. Util.	15.78	23.53†	5.39	21.17
Wis. Pr. & Lt. & sub.	12.73	14.71†	5.91	18.64
Midland United				
Indiana Service	9.41	13.44*	6.10	15.51
Nor. Ind. Power	8.31	..	3.04	11.35
Nor. Ind. Pub. Serv. .	8.11	..	3.99	12.10
Pub. Serv. of Ind. ..	10.48	11.22*	5.82	16.30
National Pow. & Lt.				
Birmingham Elec.	7.72	10.94	6.04	13.76
Carolina Pow. & Lt. ..	8.98	16.20	5.05	14.03
Houston Ltg. & Pow.	11.50	14.59	12.19	23.69
Pa. Pr. & Lt. & sub.	7.39	..	7.93	15.32
N. E. Gas & Elec. Assoc.				
New Bed. Gas & Ed. Lt.	7.47	11.96*	8.59	16.06
N. E. Power Assoc.				
Conn. River Power ..	8.47	..	2.23	10.70
Fall Riv. El. Lt.	5.31	7.26*	2.44	7.75
Green Mt. Power ...	7.87	12.56*	6.18	14.05
Lawrence Gas & Elec.	6.74	11.19*	4.28	11.02
Narr. Elec. & sub.	9.08	..	5.64	14.72
N. E. Power	5.35	..	2.93	8.28

	Depr. (Pub. Amt.)	Depr. (Inc. Tax)	Maintenance	Depr. and Maint.
N. E. Public Service				
Central Maine Pow.	9.51	..	5.67	15.18
Central Vt. Pub. Ser.	10.84	..	4.71	15.55
Cumberland Co. Pow. & Lt. & sub.	8.89	..	7.61	16.50
Pub. Serv. of N. H.	10.00	..	5.39	16.39
Twin St. Gas & Elec.	11.83	..	2.99	14.82
Niagara Hudson Power				
Buff. Niag. Elec.	11.54	..	6.59	18.13
Cent. N. Y. Power	11.34	..	6.88	18.22
N. Y. Power & Lt.	11.74	..	5.02	16.76
Niag. Falls Power & sub.	9.64	..	3.24	12.88
Niag. Lock. & Ont. Power & sub.	11.60	..	4.43	16.03
North American Co.				
Cleve. El. Illum.	13.24	14.48*	6.01	19.25
Ill. Ia. Pow. & sub.	12.54	..	4.91	17.45
Kansas Pow. & Lt.	15.32	..	4.30	19.62
Mo. Power & Light	12.75	..	4.21	16.96
Potomac El. Power	11.72	15.51*	4.70	16.42
St. Louis Co. Gas	8.70	12.61*	7.71	16.41
Un. Elec. of Mo. & sub.	12.80	22.17*	5.26	18.06
Wisc. Elec. Power	12.05	..	6.02	18.07
Wisc. Gas & Elec.	12.24	..	4.64	16.88
Wisc. Mich. Power	12.76	..	5.27	18.03
Penn. Gas & Elec.				
No. Penn. Gas & sub.	11.90	6.35*	3.21	15.11
Portland Elec. Power				
Port. Gen. Electric	8.29	..	5.52	13.81
Sioux City Gas & Elec.				
Iowa Pub. Service	12.01	14.71*	5.22	17.23
Sioux C. Gas & Elec. & sub.	11.22	10.47*	5.56	16.78
Southwn. Development				
West Texas Gas	16.51	..	2.83	19.34
Standard Gas & Elec.				
Calif. Oregon Pow.	9.63	..	5.11	14.74
Duquesne Lt. & sub.	9.66	..	6.86	16.52
Louisville Gas & Elec. & sub.	11.60	..	5.79	17.39
Mt. States Power	5.52	..	4.28	9.80
North. States Pow. (Minn.) & sub.	9.51	..	4.49	14.00
Okla. Gas & Elec.	10.24	..	5.55	15.79
San Diego Con. Gas & Elec.	15.98	..	8.61	24.59
South. Colo. Power	12.45	..	5.28	17.73
Wisc. Pub. Svc. & sub.	11.95	..	5.95	17.90
United Gas Improvement				
Conn. Light & Power	9.06	12.94*	6.19	15.25
Del. Pow. & Light	12.00	12.00*	2.58	14.58
Luzerne Co. Gas & El.	15.50	15.50*	5.58	21.08
Phila. Elec. & sub.	8.29	11.38	4.63	12.92
United Light & Power				
Columbus & South. Ohio Electric	13.61	15.06*	5.85	19.46
Iowa-Nebr. Light & Pow. & sub.	13.88	12.85*	4.29	18.17
Kansas C. Pow. & Lt.	13.05	13.49*	4.70	17.75
Madison Gas & Elec.	11.09	12.19*	3.89	14.98
Mich. Con. Gas.	5.57	7.38*	4.91	10.48
Milw. Gas Light	7.77	9.33*	3.64	11.41
San Ant. Pub. Serv.	13.07	12.07*	7.32	20.39
Util. Power & Light				
Cent. States Power & Lt. & sub.	11.23	23.75	5.14	16.37
Indian. Pow. & Lt. & sub.	13.62	12.60	6.04	19.66
Interstate Pow. & sub.	11.31	18.72	6.23	17.54
Laclede Gas Light	7.58	10.48	4.64	12.22
Utility Service				
Marion-Res. Power	8.72	11.77*	6.28	15.00
Washgn. & Suburban				
Wash. Gas. Lt. & sub.	5.71	7.61*	5.28	10.99

* Claimed.
† Estimated.

in the financial services (though in less convenient form) but the statistics and ratios for depreciation and maintenance present interesting new material. Not all companies issue maintenance figures, and the amount of depreciation charged for income tax purposes (as contrasted with the figure reported to stockholders) is seldom or never published, while the various ratios presented in the SEC report are not usually available in the reference books. As the latter are of special interest as yardsticks to compare the depreciation and maintenance policies of the various systems, we reproduce some of them (omitting a few of the smaller companies), for the year 1939 only, on pp. 358 and 359.

SEC Questions Buying of Junior Securities in Open Market

THE SEC recently disapproved an application by Washington Gas & Electric Company to purchase its junior bonds in the open market, since it appeared improbable that they could be paid in full at maturity, but permission was given to purchase the senior bonds. The commission referred to the "probable inequities of a company in such a weak financial condition using free cash for the retirement of junior obligations, when there is a substantial amount of senior securities outstanding."

The commission also ruled that no bonds could be purchased from any offi-

cers or directors of the holding company system, or from or through any firms with which such individuals have any connection.

It is not clear whether the SEC intended to establish a broad precedent in this case, however, as the amount involved was very small ($100,000) and the commission evidently thought that customers of the banking house, A. C. Allyn & Company, had enjoyed some advantage in disposing of their bonds to the company.

SEC Orders Complete Separation of Service Units

THE SEC late in August rendered a decision forbidding Electric Bond and Share and its subsidiary service company, Ebasco Services, Inc., from having any interlocking personnel or management drawing joint salaries from both companies. It is also indicated that a general rule of this character may be applied against all registered utility holding companies. (See also p. 371.)

The commission's objection to interlocking management is said to be due partly to fears that service companies are being used as an instrument to control subsidiaries, and also to the difficulty of figuring cost of service by allocating accurately the time of officers and employees between service company and holding company.

Arm's-length Bargaining Again

THE question of arm's-length bargaining, held in abeyance while the SEC collected two volumes of data and opinions from the utilities and the investment bankers, has been revived recently by SEC orders against Dillon, Read & Company and the Mellon Securities Corporation. These two firms had arranged to head underwriting syndicates to handle substantial bond issues for subsubsidiaries of United Light & Power Company: $29,000,000 Columbus & Southern Ohio Electric Company 3½s (Dillon, Read & Company), and $16,500,000 San Antonio Public Service 3½s (Mellon Securities Corporation). Both firms must show that they have not been affiliated with the system in the past to such a degree as to jeopardize the principle of "arm's-length bargaining." However, this will not delay the bond offerings, as it is merely necessary to impound the underwriting fees.

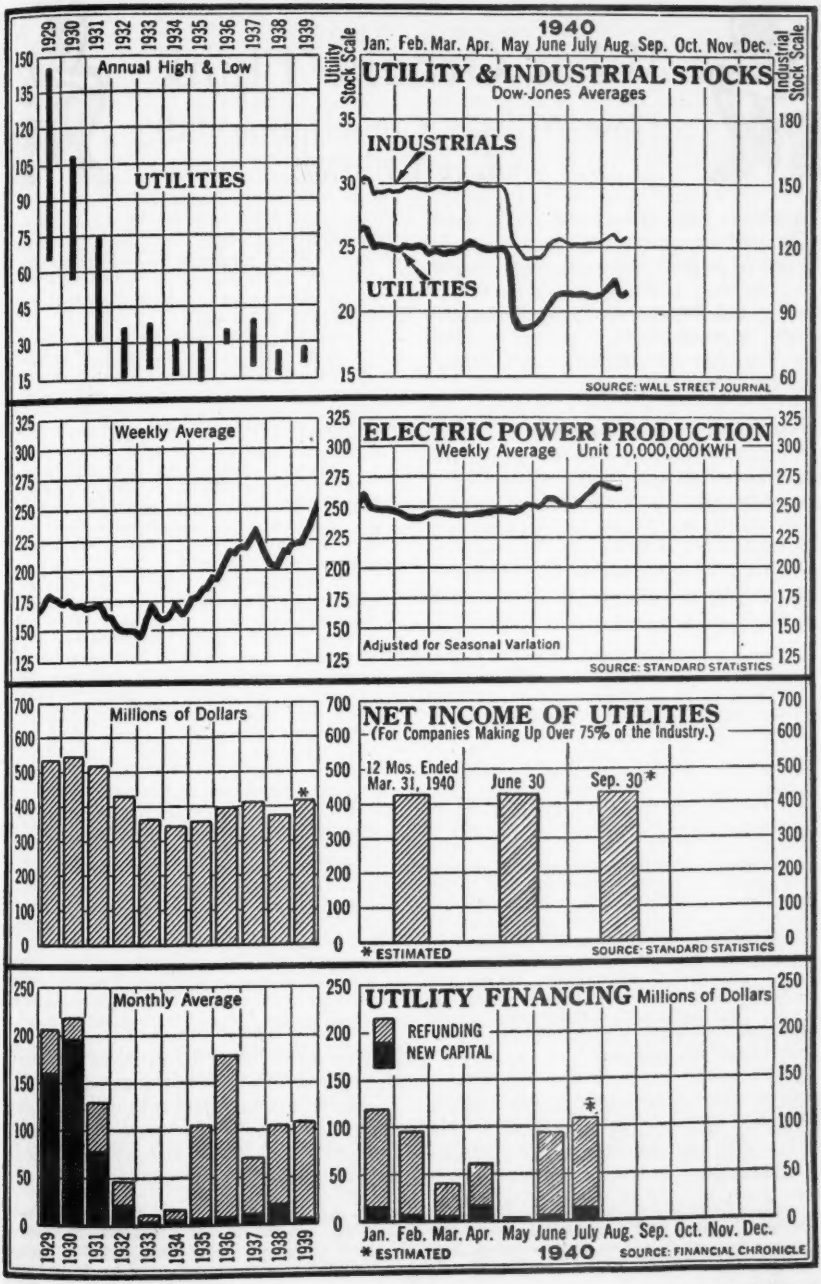
The action against Dillon, Read is the third against that company, all the actions involving subsidiaries of United Light & Power.

The present difficulty in the case of Mellon Securities Corporation may lie in the fact that the Mellon family has large common stock holdings in both Mellon Securities Corporation and Koppers Company, while the latter owns stock in United Light & Power.

North American

NORTH American and Utilities United Light and Power systems each have approximately a one-fifth interest in Detroit Edison. In ruling on the latter's application for an exemption as a subsidiary, the SEC recently declared the company a subsidiary of North American, but not of United Light and Power. (See also p. 378.) Coming at a time when news was scare, "gossip" writers gave the Edison news considerable publicity and speculated on the possibility that North American would distribute part of the stock to its own stockholders, or make a public offering, in order to reduce its interest from 19.3 per cent to less than 10 per cent. These reports have been denied by the company, which has also filed a petition with the circuit court of appeals for a review of the SEC decision.

Hearings were to be resumed September 9th on the North American integration plan. It was understood that the first group of subsidiaries to be considered would be the Wisconsin companies, later St. Louis and Illinois-Iowa, with Detroit Edison to come up at some later date (if the order stands).


1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939
Annual High & Low
UTILITIES
1940
Jan. Feb. Mar. Apr. May June July Aug. Sep. Oct. Nov. Dec.
Utility Stock Scale
Industrial Stock Scale
UTILITY & INDUSTRIAL STOCKS
Dow-Jones Averages
INDUSTRIALS
UTILITIES
SOURCE: WALL STREET JOURNAL
Weekly Average
ELECTRIC POWER PRODUCTION
Weekly Average Unit 10,000,000 KWH
Adjusted for Seasonal Variation
SOURCE: STANDARD STATISTICS
Millions of Dollars
NET INCOME OF UTILITIES
(For Companies Making Up Over 75% of the Industry.)
12 Mos. Ended Mar. 31, 1940
June 30
Sep. 30 *
* ESTIMATED
SOURCE: STANDARD STATISTICS
Monthly Average
UTILITY FINANCING Millions of Dollars
REFUNDING
NEW CAPITAL
Jan. Feb. Mar. Apr. May June July Aug. Sep. Oct. Nov. Dec.
* ESTIMATED
1940
SOURCE: FINANCIAL CHRONICLE

What Others Think

How Will the Conscription Bill Affect Utilities?

As these lines are written, Congress is still struggling with legislation designed to impose some form of compulsory military training on the youth of the United States during peacetime. Already approved is a measure enabling the President to mobilize the National Guard during peacetime.

For utility executives who must plan operations considerably in advance, the possibility of both of these measures taking young men out of key positions is a minor problem, yet one worthy of serious consideration. The Washington correspondent for *Telephony* (issue of August 10, 1940), organ of the independent telephone industry in the United States, has this to say on the subject:

> The net result of either National Guard mobilization or peace-time conscription is not likely to be so burdensome as to constitute a serious operating problem for the industry, provided steps are taken *now* to increase the margin of technical-trained personnel reserves. The degree of desirable increase would vary with each company. But, for the average fair-sized company, an increased margin of reserve would probably run around 10 per cent.
>
> Of course, this does not mean increasing the payroll for male technicians by 10 per cent. It does not mean that the payroll has to be increased much, if at all, beyond the needs of ordinary growth of operations. It *does* mean concentrating on training technical substitutes, particularly among the younger unmarried men in your organization so that temporary displacements caused by conscription for National Guard service can be handled smoothly.

From the standpoint of the electric utility industry, the *Electrical World* makes this contribution in the form of an editorial:

> While Congress debates the calling of the National Guard and conscription, every employer and every young man wonders how he will be affected. If, as has been freely predicted, there will be no wholesale exemptions this time, but only deferments based upon consideration of dependency, business disturbance, or occupation connected with defense, where does that leave the electrical industry?
>
> While it is too soon to know what the industry will do, certain power company executives have already indicated that unless key men are involved they will make no effort to claim right of deferment.
>
> However, for some time the government has insisted that an adequate power supply was a prime requisite for national defense. Upon that assumption it would be logical to expect that utility men might largely fall in a deferred classification, as well as those working on power supply and distribution equipment for utilities.
>
> On the other hand, an army requires a great many trained electrical men and, as in the last war, these men must come very largely from industry. The difference might be that the Army will be less wasteful this time of special talent and call only such members as are actually required for special work, and not, as in 1917 and 1918, put trained electrical men who enlisted as engineers into almost everything but engineering work.
>
> If those in charge of selection of men for military training will call for only such experience as they have actual need, the drain upon utilities and manufacturers will not be nearly as great as it was a quarter of a century ago.
>
> In the hurly-burly of war, when speed is of such great importance, waste of money, equipment, and man-power can be expected. In peacetime, however, more considerate action would be expected, with the result that business and essential defense operation should suffer the minimum disturbance.

This same thought regarding the part to be played by specially trained recruits in the rearmament program was also discussed by the Washington dispatch in the *Telephony* article, already mentioned, as follows:

> . . . it is by very reason of the fact that you cannot go out on the street and pick up a good telephone technician that the Army and Navy have special need to draw upon

the reserves of the telephone companies in proportion to the increase in our armed forces. The Signal Corps will want to "borrow" a number of telephone men as part of the Army training program.

These men will be taught to use their technical knowledge for regular field communications work. Unquestionably the industry will be glad and proud to coöperate. But the situation calls for advance planning in the form of stepping up technical personnel reserves as already described. Information as to what may be expected of individual companies along this line will undoubtedly clear through the industrial associations.

IN planning for possible displacement of individual male employees for military training, the logical first step would be a check-up on actual personnel to determine just how many employees and officials are (1) associated with the National Guard or other military reserve organizations; (2) how many men are between the ages of twenty-one and thirty-one, unmarried, and without dependents.

Utility management must also bear in mind probable provisions of law which require employers to hold open jobs for men who have been called up for training. Of course, most utility companies would want to do this anyhow without statutory mandate. But as a matter of record, it is necessary to keep the legal obligation in mind in planning any personnel program. The New York Telephone Company has already announced a very generous arrangement for taking care of its employees called up for military training.

The restriction of the proposed peacetime conscription to unmarried young men without dependents between the ages of twenty-one and thirty-one probably cuts down to some extent the number of eligibles now in utility employment.

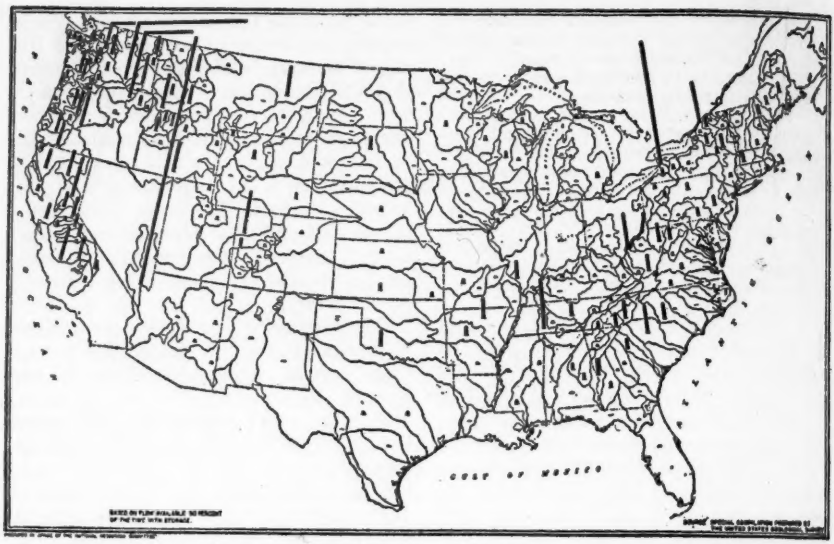
This is by reason of a rather obvious factor that any man who is occupying a key position in a utility organization is quite likely to be either (a) over thirty-one, or (b) married.

Our National Water Resources

IN a recently published pamphlet, entitled "Our National Resources," the National Resources Planning Board discussed briefly the problems connected with water use and water control. The board said that a hydro power problem may be complicated by requirements for navigation, water supply waste, dilution, or flood control. Likewise, irrigation may be complicated by water pollution (natural or man-made). In short, all related phases must be provided for in a just solution of a one-phase problem.

Discussion of water resources needs, therefore, according to the board, should be based on constant thought in terms of "integrated" or "comprehensive" plans. After reviewing problems in connection with drainage basins and ground water supply, the board had this to say on the subject of "multiple-purpose projects":

> The foregoing review suggests that physical works for the use or control of water ought to be so built and operated as to serve not only a single primary purpose, but also as many related purposes as possible. That such design has not been more common in the past has been due to diversity of interest among the constructing agencies. But within the past few years there has been a great advance both in understanding and in application of the principles of multiple-purpose design of water projects. Substantial progress has been made in coördinating Federal and state interests in such projects. The Army Engineers have built the Bonneville dam on the Columbia river for both navigation and power, and the Tygart dam on the Kanawha river for navigation and flood control. The Bureau of Reclamation has built the Grand Coulee dam on the Columbia and the Boulder dam on the Colorado for irrigation, flood control, and power, the latter project involving agreements with several states through an interstate compact. The Grand River dam in Oklahoma is built by the state with provisions for flood control designated and paid for under Federal authority. The complete river project of the Tennessee Valley Authority provides navigation facilities designed by the Army Engineers and flood control and power as designed by the authority, with full considera-



LOCATION AND PROPORTION OF POTENTIAL WATER POWER IN UNITED STATES

tion of other interests of the affected states.

Other national resources touched upon in the pamphlet included: Population, economic consumption, production, transportation, communication, energy, land, forests, recreation and wild life, minerals, research, invention, health, public works planning, and education.

State Agency Looks into "Share-expense" Travel Tours

"SHARE-EXPENSE" automobile trips, inaugurated by individuals and unlicensed "travel bureau" concerns, in violation of the motor transportation laws of Oregon, are getting the attention of Ormond R. Bean, state utilities commissioner of Oregon, who recently ordered a thorough investigation in conjunction with the state police, the law-enforcing agency under the Motor Act.

Information has come to the commissioner that a nation-wide system of "share-expense" operation is being carried on by unlicensed and uninsured "bureaus" and auto drivers in violation of not only the Oregon law but motor laws of other states.

Commissioner Bean already has brought this matter to the attention of the Interstate Commerce Commission officials and, in several cases, has turned over telling evidence. In one case a southern Oregon judge fined a "share-expense" driver who had violated the Oregon Motor Transportation Act, $150 and costs. In this instance the car was in a crash which sent one passenger, a Seattle resident, to the hospital. The judge decreed that the driver of the car also should pay the doctor and hospital expenses of the injured passenger.

In many instances the drivers of these cars do not carry any personal liability insurance and the passengers are running a personal risk of serious injury and death, Bean said. Insurance policies are

"I WISH THAT GUY WINCHELL WOULD DELIVER HIS OWN SCALLION MESSAGES"

null and void if cars are used while performing an illegal act such as carrying passengers without protection.

EVIDENCE has been received by Bean of a current case where a certain car made over for hearse use was driven to Omaha where the Oregon license plates T 1-817 were transferred to a sedan on an Omaha parking lot and the car driven into Oregon where the driver was arrested for violation of the Motor Act. Six passengers were driven in this car on a "share-expense" scheme, two of the passengers doing the driving. The car was apprehended and the arrest made near The Dalles by a state patrolman. The driver of the car pled guilty and was fined with costs. The charges were hauling passengers for hire from Omaha to Portland without first acquiring an Oregon PUC permit and switching Oregon license plates. Commissioner Bean stated:

> We are just starting this probe, and no stone will be left unturned to bring to justice those persons or concerns violating the Motor Transportation Act. In further protection of the public, charges of a serious nature have come to our attention and out of many cases of this share-expense transportation scheme may result charges of violation of the Mann white-slave law.
>
> The so-called "travel bureau" also is under investigation as evidence has reached our office that the "travel bureau ring" is nation-wide in scope and the information we are gathering is being turned over to Federal authorities as "travel bureaus" of this

nature are required to operate under ICC license.

The scheme in this for-hire "share-expense" idea, aided and abetted through false advertising on the part of individuals as well as organizations hiding under the name of "travel bureau," is to receive from the prospective traveler a sum of money which is paid to the travel bureau, which demands that the passenger shall sign a liability release. This fee is for "making the contact" between driver and passenger; then the passenger must sign another liability release to the driver of the car when the said passenger pays a second fee to the driver.

The office also has uncovered instances where some passengers have paid these fees and then when many miles from their destination, the drivers, alleging shortage of funds with which to buy more gas and oil, have demanded more money from their passengers. In other cases some passengers have been left stranded and without funds. The passengers do not know that they are traveling without protection of insurance or law.

The Oregon state police department is coöperating vigorously with Commissioner Bean to stamp out this racket.

Moving American Defense Forces

On the walls of an unpretentious government office in Washington, D. C., is a new sort of "war map." It is dotted with small red pins, pink arrows, and red and green tags held in place by thumb tacks. The story it tells is how America's largest troop movement by rail since the World War was handled to the complete satisfaction of the War Department. It was all explained in a recent release by the Association of American Railroads from Washington, D. C.

As hundreds of special trains moved from all parts of the country toward the maneuver areas of the four armies, the map was changing constantly. Progress telegrams came in at the rate of about one a minute, telling the location of trains carrying National Guardsmen and members of the regular Army. This information, received by the military transportation section of the car service division of the Association of American Railroads, was immediately passed on to the commercial traffic branch of the Quartermaster General's office, where it was recorded on the map.

The huge map is divided into four parts, each representing the area covered by one of the four armies. It shows, among other things, the rail lines leading to the concentration districts, with junction points indicated by red pins and detraining points by pink arrows. Green tags represent units of the regular Army and red tags, the National Guard.

As the wires came in, the tags were moved. During the days of the heaviest troop movement, men remained on the job day and night to keep the map up to the minute. Thus was the War Department kept informed of the whereabouts of each train from the time it started until it reached its destination.

Not since the World War have the government and the railroads attempted to keep their fingers so closely on a troop movement. The importance of this lies in the frequent necessity, especially in wartime, of diverting a troop train, and considerable time would be lost in accomplishing this if the location of the train were not known constantly. The recent movement, then, was as much a test of planning as of transportation.

The map in the Quartermaster General's office bore mute evidence of how well the test was met. It revealed that, in spite of unfavorable conditions such as excessively hot weather in some sections and torrential rains and winds of hurricane proportions in others, trains, on the whole, maintained their schedules, and some were even ahead of time. It revealed, too, that the War Department knew the approximate location of each train at all times. As little as fifteen minutes passed between the time a telegram was sent and the information was recorded on the map.

This achievement was the direct result of careful planning, preparation, and coöperation on the part of both the

railroads and the government. On August 1st, the car service division of the Association of American Railroads created the military transportation section, the duties of which were to maintain close liaison between the military authorities and the railroads. Headquarters were set up in the office of the Quartermaster General in Washington, with Arthur H. Gass, a railroad officer of wide experience along this line, in charge.

THE new section's first job was to transport 150,000 troops and their equipment to certain areas throughout the United States so that they could participate in mock warfare. Following the maneuvers, the men were to return home.

Both movements were scheduled for that period when the railroad's summer business was at its height and passenger equipment was being used for the large volume of vacation travel.

Immediate steps were taken to insure successful handling of the troops. Arrangements were made to obtain the necessary equipment when and where it was needed. Schedules were worked out by the regional passenger associations in coöperation with the military authorities and the operating departments of the railroads affected. Field representatives were appointed to assist in the smooth operation of troop and supply trains, and railroad operating and passenger traffic officers were assigned to ride these trains. The office of the military transportation section became the nerve center of the entire operation, and reports on the progress of the movement were to be sent in promptly.

The steady march of the little red pins, pink arrows, and red and green tags across the face of the huge map in the Quartermaster General's office, faithfully reflecting the movement of hundreds of special trains all over the continent, was the result of the biggest piece of transportation planning ever undertaken by the War Department and the railroads in time of peace. In fact, at its 3-day peak, the movement of troops surpassed anything carried out during the World War.

A Review of West Virginia Regulation

IN three consecutive issues of the *West Virginia Law Quarterly* there is appearing a series of articles entitled "The West Virginia Public Service Commission," by C. A. Peairs, Jr., of the faculty of the Northeastern University, Boston, Mass. This series, which began with the April issue of the West Virginia University publication, sketches a rather detailed and interesting history of regulation in West Virginia. More than that it speculates upon the progress of utility regulation generally.

Mr. Peairs approaches the subject rather philosophically, pointing out that "a distinct lag is usually to be noticed in the development of new legal institutions" —meaning that the need for commission regulation was felt considerably in advance of the actual creation of such bodies as part of our governmental pattern.

Gas utilities and railroad companies date the growth of their commercial operations in America from the very first quarter of the nineteenth century. Telegraph service had come into popular usage before the Civil War, while electricity and the telephone utilities were both well on their way to becoming major industries before the turn of the century. Yet, it was not until 1907 that full-fledged state commission regulation, with substantial jurisdiction over rates and service, appeared in New York and Wisconsin.

FOR obvious reasons, it was the railroads which first attracted regulatory attention, but early efforts along this line were experimental. Even in the field of railroad regulation, it was not until 1875 that commissions were given actual powers of control. Before that they were

largely advisory or investigatory boards. West Virginia inherited its early regulatory ideas from its mother state of Virginia. It reënacted in 1863 the existence of a "board of public works" created by the Virginia legislature in 1816. The principal duty of this board (composed entirely of *ex officio* members of the cabinet) was to take care of the few remaining toll-charging turnpikes, notably the historic Cumberland pike. A "railroad commission" was created in 1877, but was largely an advisory body.

It was not until 1913 that the West Virginia Public Service Commission—since one of the most active and influential of all state regulatory bodies—came into statutory being. The original West Virginia Act, Mr. Peairs tells us, "was largely a copy of the Wisconsin act, with reflections of the Interstate Commerce Act to provide for uniform regulation as to railroads." As it was finally amended in 1915, there has not been very much change in subsequent years.

It is a body composed of three members appointed by the governor with the approval of the state senate. Describing the day-to-day work of the commission, Mr. Peairs states:

> The great majority of litigation before the commission consists of informal complaints. The commission handles from three to four hundred informal cases annually. These are made by letter or by personal call, and are disposed of, usually after factual investigations, and, occasionally, legal work on the part of the commissioners, as often as possible by a compromise or other settlement satisfactory to both parties. If this is impossible in any case, the complaint must be made formal, to satisfy due process requirements. A formal complaint is filed with the commission, and a complete hearing had, with a stenographic record, and transcript, of all the proceedings, as soon as is consistent with proper notice to all parties concerned. Some cases may be disposed of quickly, but others take all the time of the commission for weeks or even months. The commission then renders a written opinion, similar to that of an appellate court, accompanying its order. The commission handles a great many of these formal cases—3,000 since its inception, or over 100 per year.

REVIEWING the record of the West Virginia commission in the field of formal regulatory litigation, Mr. Peairs finds that the decisions of the state board have compared favorably with other leading regulatory bodies. Perhaps the most distinct contribution of this active body to the regulatory law has been in the field of natural gas regulation, where the commission has pioneered in laying down principles which have received subsequent recognition and approval from other quarters.

A Survey of the Tax Burden of American Industry

THE extent to which excessive taxes work hardship upon industry and individuals is indicated by a survey of 183 representative American corporations, recently made by the American Federation of Investors. The statistical data upon which the study is based were compiled by the Federation, in coöperation with the corporations listed in the tabulation printed in the July issue of *Investor America*. The statistical analysis is published under the signature of Charles A. Segner.

All figures used were taken from the official records of the various companies and may be depended upon as authentic. Footnotes are used to explain particular situations. This survey of taxes for 1939, paid in most instances this year, reveals the following astounding facts:

1. American industry paid almost twice as much in taxes in 1939 as was paid in dividends on common stock.
2. Taxes on industry amounted to more than one-half of net earnings, before taxes and dividends.
3. Taxes for 1939 paid by the 183 companies included in the study were equivalent to $329 per common stockholder and to $611 per employee.

"GIMME A DOLLAR IN QUARTERS, PAL. GOTTA LEAVE TH' LIL' GIRL A TIP FOR TH' SHWELL LONG-DISTANCE SERVICE"

4. These taxes amounted to an average of $3.05 on each share of common stock, whereas the total amount paid in dividends was equivalent to an average of but $1.62 for each share of common stock.

5. Gross assets of these 183 corporations totaled $45,545,000,000.

6. Total taxes paid for the 1939 fiscal year were $2,065,000,000.

7. Aggregate net earnings of these companies for 1939 were $1,761,000,000, after taxes.

8. Taxes consumed 54 per cent of the net earnings (before taxes) of the 183 companies—more than one-half of such earnings.

9. The earnings of 7 of these companies were completely wiped out by taxes, leaving the companies "in the red" for the year. Twenty other companies, with earnings sufficient to justify modest dividends if taxes had been reasonable, found it advisable to withhold dividends because excessive taxes so seriously reduced the amounts available.

10. More than 7,000,000 holders of preferred and common stock have invested all or a portion of their savings in the 725,000,000 shares of these 183 companies.

11. The average number of common shares owned by each of the 6,286,000 common stockholders in these 183 companies is 108. More than three-fourths of the common stockholders own not more than 100 shares each.

12. The total number of employees of these 183 companies in 1939 averaged 3,378,000, or less than one-half the number of investors in common stock. The average number employed per company in 1939 was 18,460, compared with an average of 17,373 per company in 1938.

EXCESSIVE taxes last year forced many corporations to pay no dividend at all or dividends too small to encourage investment. Many small companies performing an essential service

are finding it impossible to continue business under present circumstances.

Among the 183 representative American corporations studied in Mr. Segner's tabulation were included the following utility companies other than railroads: American Telephone and Telegraph Company, American Water Works & Electric Company, Cities Service Company, Columbia Gas & Electric Company, Commonwealth Edison Corporation, Consolidated Edison Company, Detroit Edison Company, Middle West Corporation, Niagara Hudson Power Corporation, North American Company, Pacific Gas and Electric Company, Peoples Gas Light & Coke Company, Public Service Company of New Jersey, Southern California Edison Company, United Gas Improvement Company, Western Union Telegraph Company.

For each corporation listed the tabulation gives the total assets in dollars, the total taxes paid in 1939, net income taxes, the percentage of taxes to net earnings, taxes per common share, dividends per common share, taxes per common share holding, and taxes per employee.

There were also given total shares outstanding, total number of stockholders, and employees.

TVA Power and Aluminum Supply

A RECENT issue of the *Commercial & Financial Chronicle* contained an article on "Power without Glory" by Ernest R. Abrams, describing the inability of TVA to handle satisfactorily the current and anticipated power needs in its territory, especially for increased aluminum production for the airplane defense program. Norris dam has apparently proved disappointing as a power source due to the fluctuation of water supply in the Tennessee valley. Hence there might appear to be justification for the additional appropriations for TVA of approximately $65,000,000 (over the next three fiscal years) granted by Congress at the urgent request of the National Defense Advisory Commission.

But as Mr. Abrams points out, privately owned electric utilities within transmission range of the Tennessee valley have sufficient surplus power to meet this anticipated aluminum demand, although the price of such power would be about one mill per kilowatt hour more than the present cost of TVA power to the Aluminum Company.

Mr. Abrams also reveals that the Aluminum Company in the period 1910-34 expended some $45,000,000 to develop hydroelectric facilities on the little Tennessee river, coöperating with the U. S. Army Engineers, the only Federal agency having full jurisdiction at that time. The TVA, however, apparently feeling that this would interfere with its own development work, bought two small tracts of land in the heart of the Aluminum Company's reservoir site, effectively spiking any plans for private development. Hence Aluminum Company has had to "play ball" with the TVA rather than complete its own development, which would have added, according to Mr. Abrams, over six times the volume of power involved in the present increased TVA appropriation.

WHILE Congress has emphasized "national defense" in creating TVA, the latter has contracted away its hydroelectric power (except for the output of the Sheffield steam-electric plant, which theoretically is reserved for standby use), and dependable power is not generally available for defense purposes now that it is needed.

—O.E.

The March of Events

"Shared" Officers for Service Companies Restricted

THE Securities and Exchange Commission revealed a new regulatory policy on the subject of interlocking officers, employees, and directors jointly paid by holding companies and service companies. This was first announced in the form of a letter from the director of the commission's public utilities division, Joseph L. Weiner, addressed to various companies affected.

The letter called attention to the commission's decision which was later made public in the Ebasco Case. This opinion gave several officers holding duplicate positions with the Electric Bond and Share Company and Ebasco the alternative of either resigning one or the other of their positions or having Electric Bond and Share pay full salaries for such duplicate services. In the latter event the mutual service companies being operated on a cost basis would, presumably, stand to gain through the resulting operating economy.

The commission warned that if this step does not prove effective, it would consider the question of complete segregation of directors, officers, and employees between registered holding companies and subsidiary servicing companies in the interest of "economical and efficient servicing for the benefits of associated companies at cost under the act."

The letter from Mr. Weiner directed certain other companies to notify the SEC within thirty days whether or not they were taking steps to eliminate "shared salaries and expenses."

National Defense Program

SECRETARY of the Interior Harold L. Ickes on August 26th announced that he had submitted a report to the National Defense Advisory Commission on industries important to the national defense and feasible of establishment in the Pacific Northwest.

The report was prepared by Bonneville Power Administrator Paul J. Raver, who was in Washington at that time conferring with Federal officials relative to the national defense program. It dealt with low-cost power and the mineral and other resources in the Bonneville area, and outlined the possibilities for the establishment in the Northwest of industries vital to national defense.

The report was discussed with Defense Commissioner Edward J. Stettinius and Gano Dunn of the commission when recommendations regarding Bonneville power were presented to them by Under Secretary of the Interior Alvin J. Wirtz and Administrator Raver.

The 3-part report discussed the needs of defense industries such as aircraft, ordnance, munitions, and ship building, the basic industries whose products are essential to these industries, and the availability of Northwest resources and raw materials.

According to Administrator Raver, "high-grade iron and alloy steels, the ferro alloys, electrolytic zinc, magnesium, nitrates and military explosives, calcium carbide and its derivatives, and chlorine and chlorates are materials which the Northwest can produce due to the availability of low-cost electric power and raw materials."

The report pointed out that owing to the availability of low-cost Columbia river power three new industries have come to the Northwest during the present year. These industries include the Aluminum Company of America, the Pacific Carbide and Alloys Company, and the Sierra Iron Company.

In submitting his report to Secretary Ickes, Administrator Raver said that increasing industrial inquiries for Bonneville power were indicative of the growing importance of Columbia river hydroelectric power to the industrial welfare of the nation. The administrator said:

"These verify the soundness of the outlook for an industrial development in the Northwest, stimulated by low-cost Columbia river power, and beginning from a base of electrochemical and electro-metallurgical industries. The Bonneville Power Administration therefore calls upon the defense agencies to give careful consideration to the rôle that Bonneville and Grand Coulee can play in national defense industries."

Administrator Raver last month appeared before the House Appropriations Committee and asked about $4,000,000 to "take care of national defense emergency in the Northwest."

The Defense Advisory Commission representatives recently told the Bonneville Administrator that large blocks of cheap power are essential for defense production. The Bonneville-Coulee ultimate power capacity will approach 2,000,000 kilowatts. During 1941 alone 540,000 kilowatts of capacity will be

installed at Bonneville and Grand Coulee. The transmission and substation capacity was said to be keeping pace with these installations.

Administrator Raver told Commissioner Stettinius that approximately 300,000 kilowatts of capacity will be available on the transmission network within twelve months. This timely contribution to the power supplies of the nation, he said, has been made possible by the recently completed interconnection of Bonneville with the huge Grand Coulee dam, by the acceleration of the installation of additional generating capacity at both Bonneville and Grand Coulee, and by the speeding up of other transmission line and substation construction.

President Roosevelt, by Executive Order, on August 26th consolidated power marketing facilities of the Grand Coulee and Bonneville dams to centralize disposal of electric energy in the national defense emergency. Mr. Roosevelt designated the administrator of the Bonneville dam as agent for sale and distribution of power generated both at Bonneville and Grand Coulee.

The order followed Mr. Roosevelt's announcement of August 24th that "the present emergency makes even more pressing the need for coördinating the power facilities of the two projects and for providing a single agency for marketing the power in the region."

As Mr. Roosevelt signed the order he took steps to assure municipalities and coöperatives in the Pacific Northwest that they would not be barred from access to the low-cost power being generated at the great Columbia river dams.

SEC Lists Utilities

THE Securities and Exchange Commission recently made public what might be called a "blue book" of 188 operating utility companies, which embraces all operating companies with $5,000,000 or more of assets which are subsidiary to registered holding companies.

It is said to be the most comprehensive compilation of its kind ever made, for between the covers of the 206-page volume can be found almost any vital statistics concerning these companies. It is the result of a study covering the activities of these companies from 1930 through 1939, prepared under the direction of Clarence A. Turner of the SEC's public utilities division.

As of December 31, 1939, the 188 companies had total assets of approximately $14,500,000,000. Regarding them, the report made three principal showings:

1. There have been increases in revenues in the last several years, especially in 1939.

2. A substantially greater coverage of fixed charges and preferred dividends has been shown over the last few years, particularly in 1939.

3. There have been changes in depreciation policies over the last several years. This is indicated by the increase in depreciation charges to income and the increase in depreciation reserves. (See pp. 357, 358.)

The survey presents an analysis of operating revenues, fixed charges, preferred and common stock dividends, capitalization outstanding, surplus, assets, fixed capital, depreciation charges and reserves, and preferred stock dividend arrearages.

There is a chart for each company showing a graphic picture of income available for preferred stock dividends on two bases.

Seeks RFC Help

AFTER a conference recently with RFC officials at Washington, Governor Rivers of Georgia expressed hope of having the government finance development of the $28,000,000 multiple-power and flood-control project at the Clarks Hill site on the Savannah river near Augusta.

Accompanied by State Senator Edgar Brown of South Carolina, Governor Rivers conferred with officials of the Federal lending agency over a proposal for the government providing funds for a joint bonding issue between the states of Georgia and South Carolina for development of the Clarks Hill project.

The plan calls for joint control and operation of the project by the two states, rather than as a government enterprise, with the government loan suggested for financing the $28,000,000 bond issue repaid out of proceeds from the sale of power over a period of thirty years. Title to the power development would revert to the two states after the loan had been liquidated.

Files for Presidential Permit

THE Nevada-California Electric Corporation, with its principal office at Riverside, Cal., recently filed with the Federal Power Commission an application for a Presidential Permit under Executive Order No. 8202 for the operation and maintenance of facilities at the border of the United States for the exportation of electric energy into the Republic of Mexico.

The applicant stated it was not aware of the effect of Executive Order 8202 until receipt of the commission's letter enclosing a copy of such order and requiring the filing of an application for a Presidential Permit. The maintenance and operation of facilities for export of electric energy have not been previously authorized under Presidential Permit, the applicant stated, but added that Yuma Utilities Company and Southern Sierras Power Company (to which the applicant is successor in interest) were granted permission, prior to the effective date of Executive Order 8202, to export energy under contracts filed with the commission.

Reply to SEC Insurance Study

In reply to the Securities and Exchange Commission study on life insurance, a committee of life insurance officials, headed by Leroy A. Lincoln, president of Metropolitan Life Insurance Company, recently submitted a 107-page statement to Senator Joseph C. O'Mahoney, chairman of the Temporary National Economic Committee, for inclusion in the record of the proceedings.

The statement, signed by 151 life companies which represent 60.9 per cent of total assets of all life companies in the United States and 63.7 per cent of the total life insurance in force in such companies, was presented in answer to testimony taken before the monopoly committee during the last two years.

Unable to obtain a hearing in which the industry sought to present its testimony in "its own words and in its own way," the industry obtained permission from Senator O'Mahoney to prepare its statement for inclusion in the record.

Alabama

May Not Use TVA Power

Power from the Tennessee Valley Authority may not be used by the $15,000,000 aluminum plant to be built in Alabama by the Reynolds Metal Company, according to a recent press dispatch from Washington. The latter quoted M. M. Caskie, vice president, as saying the cost of generating power with a coal-burning plant was being studied.

The company recently obtained a $15,800,000 loan from the RFC with which to finance the plant and it was announced the latter would be built somewhere in north Alabama where TVA power would be available. Although Arkansas and other states have bid for location of the plant, R. S. Reynolds, Jr., treasurer of the concern, had been quoted as saying the decision to locate in Alabama was fairly definite.

Arkansas

Power Projects Recommended

A $79,000,000 development of the White river basin, with dams and reservoirs to produce vast quantities of electric power and protect 28,000 miles from floods, was recommended by the War Department to Congress last month.

Lieutenant Colonel Stanley L. Scott of Little Rock, acting division director of United States Army Engineers, said the proposed dual dams would "be the hub around which the future prosperity of Arkansas" would turn.

R. E. Overman, chairman of the state flood control commission, said the projects would mean "the emancipation of Arkansas." The program would provide:

1. Construction of a 40,000-acre reservoir at Wildcat Shoals in Baxter county and a dam 223 feet high and 2,235 feet long at Bull Shoals, 12 miles distant. It would have a total power installation of 140,000 kilowatts, with an initial installation of 105,000 kilowatts. The first cost would be $42,000,000.

2. Construction of a 30,000-acre reservoir and a dam 206 feet high and 4,600 feet long at Table Rock, also on the White river in southwestern Missouri. Its total power installation would be 120,000 kilowatts, with an initial installation of 80,000 kilowatts. The cost would be $37,000,000.

These projects would be in addition to six reservoirs already authorized by Congress, but would be almost equal in flood-control capacity to all of the other six combined.

H. W. Blalock, member of the state utilities commission, saw the project as a connecting link between the Tennessee Valley Authority on the east and the Grand river development on the west. He said an interconnected system, including the Federal plants and private companies, would "practically assure a continuous flow of economical power."

California

Power Rates Reduced

The state railroad commission recently announced a $5,000,000-a-year gas and electric rate reduction for northern California. The cut will save electric consumers of the Pacific Gas and Electric Company $2,000,000 a year and its gas patrons $3,000,000.

Commissioner Ray C. Wakefield said the reduction would become effective in October

and "is the largest single reduction ever made by the California Railroad Commission on any utility's rates in the 28-year life of the railroad commission."

Most of the reductions will apply to domestic and commercial customers. Suggestions which were given the state commission by representatives of cities during the 10 regional conferences held in July, will have consideration in the application of the new schedule of rates, it was said.

Commissioner Wakefield said the reduction was made possible largely through increased earnings brought about by greater customer use during the last year. Tax payments made by Pacific Gas and Electric Company to the Federal, state, and local governments were said to be the largest single item of expense to the company, even exceeding labor costs.

City Signs Peace Terms

SAN Francisco's board of supervisors and public utilities commission came to terms on August 21st with Secretary of the Interior Ickes in the battle of Hetch Hetchy. Both bodies ratified a stipulation as a basis for a proposed 9-month stay in the effective date of a Federal court order restraining the city from further violation of the Raker Act.

This stipulation, which will preserve to the city during the period of the stay the present $2,400,000 annual income from PG&E distribution of Hetch Hetchy power, pledges San Francisco to the following program:

First, an effort to negotiate, by October 1st, the lease of PG&E electrical distribution facilities in San Francisco, and their operation, by January 1, 1941, as a municipal utility.

Second, the submission of a charter amendment to the voters, authorizing revenue bonds for acquisition or construction of a distributing system should the lease effort fail.

Third, a pledge by city officials to actively support the charter amendment and to obtain support from civic organizations for its passage.

Fourth, a further pledge to oppose any proposal contemplating amendment of the Raker Act by Congress in advance of the bond election.

Fifth, agreement that the proposed court stay may be dissolved if the city enters into a lease affecting Hetch Hetchy power distribution which is not acceptable to Secretary Ickes.

Sixth, to take all action necessary for general compliance with the Raker Act, in accordance with the Supreme Court's decision, on or before July 1, 1941.

Utility Withdraws

WITHDRAWAL of the Pacific Gas and Electric Company from competition with the Modesto Irrigation District was formally approved by the state railroad commission last month.

The commission granted the private company permission to sell its distribution facilities in the area to the irrigation district for $325,000.

Also approved was a contract agreement whereby the company would continue to supply electric power for distribution by the district.

The sale and agreement ended seventeen years of competition between the private and public concerns. PG&E had been serving the area with power since 1890. The district began competitive operation in 1923.

Indiana

Gas Hearings Delayed

THE state public service commission on August 15th postponed until October 1st any further hearings on the proposal of the newly organized Richmond Gas Corporation to buy the Richmond gas plant from the Indiana Gas Utilities Company for $550,000 and convert it into a natural gas plant.

The postponement was made at the request of Will Reller, Richmond attorney and secretary of the Richmond Gas Corporation. Reller told the commission numerous changes might have to be made in the capital structure of the Richmond plant to conform with commission rules.

Perry McCart, member of the state commission, had previously said the newly formed Gas Corporation must own the existing indeterminate permit to operate a gas plant at Richmond before sale of the utility could be approved.

McCart was assured the new corporation intended to buy the Indiana Gas Utilities' permit.

Iowa

New Gas Rates Filed

THE Des Moines city council recently received and filed a statement of new and old gas rates from C. A. Leland, president of the Des Moines gas division, Iowa Power & Light Company. Leland gave the new domestic, commercial, and industrial rates, under the

ordinance passed August 22nd, as follows:

The first four therms, 20 cents each; the next 11 therms, 17.5 cents each; the next 25 therms, 16 cents each; the next 100 therms, 13 cents; the next 300 therms, 10 cents; the next 1,000 therms, 6.5 cents; and all over 1,440 therms, 6 cents each. The minimum is 80 cents.

The only difference from rates charged before, according to the statement, was that the 17.5-cent bracket was 18 cents, and the 16-cent bracket was 17 cents.

Leland's statement showed charges for the first 40 therms used in gas heating of homes and in commercial space heating (including water heating but not commercial and industrial uses) follow the domestic rate changes, but all additional gas is charged at 6 cents a therm. There is an annual $85 minimum.

Leland's statement said there is a wholesale industrial gas rate for users who demand at least 5 therms an hour and use 1,000 therms a month. These users must pay a demand charge of $4 for each therm of hourly demand. In addition, they pay 12 cents for each of the first 500 therms; 10 cents for the next 500; 8.5 cents for the next 1,000; 6.5 cents for the next 2,000; and 5.5 cents for every therm over 4,000.

The minimum is $100 a month. There is also a 20 per cent reduction where usage between 6 p. m. and 6 a. m. is half the 24-hour use.

The city council has also given final passage to ordinances which would reduce the annual electric bill of the city's customers, including the city, by an estimated $80,504.

Michigan

Municipal Rates Cut

A REDUCTION in residential electric rates estimated to save consumers $125,000 a year and give Lansing one of the lowest rate schedules in the country was recently announced by the board of water and light commissioners.

The new rate of 4 cents for the first 20 kilowatt hours a month and 3 cents for the next 30 hours was effective September 1st.

Increased efficiency of a new municipally owned electric plant and its financing without a bond issue made the reduction possible, said Otto E. Eckert, general manager.

Nebraska

Hydro Districts Consolidate

NEBRASKA'S three big hydroelectric districts recently consolidated their operations into a single $60,000,000 system expected ultimately to provide two-thirds as much power as the whole state generated last year. The action culminated nearly five years of struggle for some sort of unit operation.

Formalities which will place the Federal-financed projects under a single operating board, and will give the districts "a new lease on life" through refinancing $37,837,000 in bonds, were being concluded by PWA and district officials at Kansas City.

Central Nebraska (Tri-County), Platte Valley, and Loup River Public Power and Irrigation districts will continue as separate entities, but sale and supplying of service and collection and distribution of revenues will be handled by a new organization directed by the districts' general managers.

Oklahoma

GRDA Orders Salary Reductions

PAY cuts were ordered last month by the Grand River Dam Authority for its general manager, attorney, and four other employees "in the interest of economy and due to the fact the project is near completion."

The order lowered General Manager T. P. Clonts' salary from $10,000 to $8,000 yearly; Attorney R. L. Davidson was decreased from $10,000 to $7,500; George D. Hansen, auditor, from $4,800 to $4,200; Levi Lowder, labor inspector, from $216 monthly to $200; J. S. Campbell, chief field abstractor, from $225 to $200; and J. Frank Stockton, land department, from $325 to $300.

The authority announced conditional approval by PWA was given to plans to market the project's 200,000,000 kilowatt hours of power.

The plan calls for the authority to sell direct to as many municipalities as possible and to dispose of the balance to private utilities under contracts containing a recapture clause.

Electric Rate Cut Ordered

THE state corporation commission last month ordered a decrease of electric rates in the 129 cities served by the Public Service Company of Oklahoma. At the same time the commission announced it had approved a new schedule reducing rates for residential and commercial consumers in Okemah, Nowata, and Vinita, effective September 1st.

Reford Bond, chairman of the commission, said the commission had found that earnings of the company justified a reduction of rates in the 129 cities.

The company was ordered to file reduced schedules for the other cities "within a reasonable time." The cities served by the company are in eastern Oklahoma. The rates in the three cities will be comparable to new rates announced by the Grand River Dam Authority. The new rates will mean a saving of more than $11,000 annually to consumers in these cities and will range from 7 to 11 per cent. The three cities will have a uniform rate.

Oregon

Power Pact Signed

THE city of Eugene is ready to buy Bonneville power for one year and interchange power with Bonneville for ten years, it was announced recently.

The city water board which operates Eugene's municipally owned generating and distribution system, notified the Bonneville Power Administration it had executed the interchange contract and a contract to purchase 1,500 kilowatts of prime power for not less than one year.

The agreement apparently ended a long series of disagreements and misunderstandings between the Bonneville Power Administration and the water board. Eugene is expected to go ahead with construction of a steam plant to augment its hydroelectric generation, but will use Bonneville power until the new supply is available. A Bonneville line has been completed to Eugene and has been energized for some time, awaiting a customer. The contract contained no stipulations on resale rates.

Power Ballot Deferred

SALEM'S special power committee, meeting at Salem on August 15th, adopted a resolution providing that no proposal for a municipal power system in the city should be referred to the voters until there had been a technical study of the entire power problem.

Another resolution said the council had made a mistake in granting a permit to the Salem Coöperative Electrical Association, which proposes to transmit power into Salem from a Bonneville substation located in Polk county. It was urged that no future permits be granted the coöperative.

Pennsylvania

Utility Refund Ordered

FEDERAL District Judge William H. Kirkpatrick on August 16th ordered the Edison Light & Power Company, York, Pa., to refund overcharges of $572,000, plus interest, to 30,000 consumers.

The money, which will total $632,000 or more, was collected by the company between November 30, 1937, when the state public utility commission ordered a temporary rate cut, and May 17, 1939, when the United States Supreme Court upheld the commission's power to order such reductions, pending completion of investigation.

The Supreme Court decision reversed a 3-judge Federal court, which had issued an injunction against the reduction in the first court test of the broadened powers conferred upon the PUC by the 1937 Utility Act.

South Carolina

Favor Big Coöperatives

A MOVE was recently begun to prevent the organization of small electric coöperative associations in the state. In a meeting at Columbia, the South Carolina Federation of Electric Coöperative Associations adopted a resolution expressing itself in favor of coöperatives with a minimum of 1,200 subscribers and 400 miles of rural electrification lines.

Also, the "co-ops" adopted a resolution asking the Federal government to rush work on projected lines in the state.

Texas

Gas Rate Cut Ordered

GAS rate reductions estimated to save 9,700 customers in the Rio Grande valley $25,000 a year were ordered recently by the state railroad commission in fixing a new schedule to which the Rio Grande Valley Gas Company agreed.

The cuts became effective immediately in 17 cities and for all residential customers outside of incorporated towns. In addition, Harlingen users were granted refunds of about $2,800 on gas bought since January 17th, the date on which a rate ordinance was adopted.

The rate formerly was 98 cents per thousand cubic feet with a 10 per cent discount for prompt payment and a minimum bill of $1.50. The new rate fixed by the commission was: First 1,700 cubic feet, $1.50 net; next 2,300 feet, 80 cents per thousand cubic feet; next 6,000 feet, 75 cents; and all over 10,000 feet, 70 cents. The rates are net with 10 per cent to be added for failure to pay the bill by the tenth of the month following billing.

Washington

RFC Enters Power Plan

THE Reconstruction Finance Corporation on August 15th volunteered to assist 13 public utility districts having 433,000 population in the area of Seattle, Wash., in their efforts to purchase distribution facilities of the Puget Sound Power & Light Company so that they may buy Federal power.

However, Emil Schram, chairman of the RFC, stated in a letter to Secretary Ickes of the Interior Department that he would not proceed unless the Bonneville Administration, from which the consumers wish to buy power, will sponsor the acquisition.

It is a case of one Federal agency assisting another to sell its electric power to an area now served by private interests and, according to Paul J. Raver, Bonneville Administrator, the offer of the RFC "is a forward step toward fulfillment of the desires of citizens in an important section of the Northwest."

Wisconsin

Power Interchange Allowed

AN agreement for interchange of electricity between the Madison Gas & Electric Company and the Wisconsin Power & Light Company, which was said to be in line with the national defense program, has been approved, the state public service commission announced last month.

Utility representatives said the interchange arrangement would tie the companies together in such a way that electric service in the area of the companies could not be destroyed unless a very serious breakdown of generating plants occurred.

Under the agreement for interchange of dump power energy and emergency service, the Madison Company will sell dump steam energy and the Wisconsin Company will sell dump hydro power energy. The commission said the proposed interchange of energy was consistent with a power integration program projected by its staff in May, 1936.

Agree on Rate Cut

SAVING of $114,000 a year to electric customers of the Northern States Power Company and the Midland Service Company will be effected through rate reductions on meter readings after September 1st in 60 cities and villages and 125 towns in western and northwestern Wisconsin, the state public service commission announced recently.

Class A communities in the Madison area affected include Sparta in Monroe county and Viroqua in Vernon county, while Class B communities include Coon Valley, Genoa, and Stoddard in Vernon county and Norwalk in Monroe county. Midland is a companion company to Northern States.

City Files Petition

THE city of Milwaukee, through its attorney, recently filed with the Federal Power Commission a petition to intervene in the proceedings concerning application of the Independent Natural Gas Company (Phillips Petroleum Company subsidiary) for a certificate of public convenience and necessity for construction of a natural gas pipe line from the Texas Panhandle to Milwaukee. The intervening petitioner claims interest in the matter on the grounds, among other things, that other natural gas pipe-line proposals, including an extension of The Natural Gas Pipeline Company of America's system, are pending.

The Latest Utility Rulings

Consolidation of Hearings on Holding Company Relationships

THE Securities and Exchange Commission held that hearings on applications by several interrelated companies under §§ 2 and 3 of the Holding Company Act might properly be consolidated when the primary question in each proceeding was whether a control relationship existed between the applicant and one or more of the other companies named in the applications. It was pointed out that the applications would require the presentation of common background evidence. In addition, the § 3 application for an order of exemption of a holding company and its subsidiaries would involve, to a considerable degree, questions presented in each of the other applications under § 2.

The commission believed that unnecessary costs and delays would be avoided if evidence were presented in a single consolidated proceeding rather than some eight or ten separate proceedings. It was said, however, that the commission would not be disposed to take this action if it were convinced that any applicant would be seriously prejudiced.

Counsel had pointed out the material burden which would be imposed if the applicants were required to present their § 3 cases on a variety of assumptions based on all conceivable determinations by the commissions of the status of the various companies involved in the § 2 applications. The commission thought this point was well taken and therefore modified its consolidation order to provide that findings on the § 2 applications would be issued prior to the presentation of evidence bearing exclusively on the § 3 applications. Moreover, the trial examiner was directed to require counsel to segregate, as far as possible, the presentation of evidence pertaining to the § 2 applications relating to companies whose counsel might thereby be absent from other hearings. *Re Koppers United Co. et al. (File Nos. 31-482, 31-481, 31-467, 31-165, 31-484, 31-483, 31-473, 31-167, 31-162, 31-164, Release No. 2109).*

Actual Control Governs Subsidiary Status Under Holding Company Act

WHETHER a company is to be declared not to be a subsidiary of a registered holding company under § 2(a)(8) of the Holding Company Act depends upon actual control and not artificial tests. On this premise the Securities and Exchange Commission approved a declaration that The Detroit Edison Company is not a subsidiary of The United Light and Power Company, holding through American Light & Traction Company 20.27 per cent of outstanding voting securities, and is a subsidiary of North American Company, holding 19.28 per cent of outstanding voting securities.

Whether a holding company has exercised control or effectively exerted influence is, upon applications for approval of such a declaration, material only in so far as such circumstances may evidence the existence in the holding

company of the ultimate directory power, said the commission. Inaction on the part of a holding company does not necessarily negate the existence of control or uncontrolled influences. It may only evidence satisfaction with the manner in which a subsidiary is being operated.

A subsidiary company, moreover, said the commission, does not cease to be such merely because it has been given the opportunity to build up an able and self-contained management. The problem is one of fundamentals and not superficialities, for control embraces the power to control and "subject to a controlling influence" includes susceptibility to domination. Consequently, the inquiry must look not merely to the personalities of the managers, but primarily to the factors underlying the existence and continuation of the management.

The history of the Edison Company was traced from its beginning in 1902 under the auspices of the North American. The commission concluded that the mere chronological statement of the succession of Edison's presidents and directors indicated that since its organization North American had continually maintained a position of importance and influence in Edison's affairs. This was based on stock ownership or historical association, or both. At least half, and perhaps a majority, of the present board, it was pointed out, are either associated with North American or derive their connection with Edison from North American.

On the contrary, the United system had failed in attempts to exercise control. In 1926 United suggested to Edison that as a substantial stockholder it was entitled to representation on the board. Edison's management refused to recognize any merit in the suggestion. In 1932 and again in 1934 United tried without success to secure representation by negotiation. At the 1935 stockholders' meeting United sought to force recognition by attempting to break quorum. The effort was unsuccessful.

The commission concluded that United had never participated in Edison's affairs and there had been no dealings between the companies. The narrative of United's fruitless efforts to secure representation on Edison's board carried with it the inescapable conclusion that United is not only not in a position to control Edison or exert a controlling influence over its management and policies, but that, for all practical purposes, United is what is popularly termed a mere "outsider." *Re Detroit Edison Co. (File Nos. 31-388, 31-446, Release No. 2208).*

Dormant Gas Company Not a Subsidiary Under Holding Company Act

THE Reading Gas Company, by an agreement entered into in 1885, leased all of its property, including gas mains, manufacturing plant, and franchises, for ninety-nine years to the Consumers Gas Company. The only corporate activities of the lessor gas company are the receipt of its rental, the payment of a small amount in salaries and expenses, and the disbursement of dividends. Common stock to the extent of 11.35 per cent of the lessor is held by the lessee.

Under these circumstances the Securities and Exchange Commission granted an application for a declaration that the gas company was not a lessor of Consumers Gas Company, which is a registered holding company, and of affiliated companies. The commission said:

> None of the officers or members of the board of managers of Reading are associated with or are officers or directors of either Consumers, the United Gas Improvement Company, or the United Corporation with the exception of Reading's secretary and treasurer, Carl H. Hoffman, a clerk in the employment of Consumers Gas Company. It appears that Hoffman's father was formerly secretary and treasurer of Reading Gas Company and, upon his retirement from active business in 1937, secured his

son's appointment as his successor. All of Reading's officers and members of the board of managers reside in Reading and vicinity.

In view of the inactive and dormant character of Reading's present business, and the absence of any indication in the record of the exercise or the power to exercise control or controlling influence over the management or policies of the applicant by Consumers, the United Gas Improvement Company, or the United Corporation, the commission is able to make the requisite findings under § 2(a)(8). Since Consumers, however, has a substantial stock interest in Reading which may prove sufficient for it at some future time to exercise control or controlling influence over Reading, it appears appropriate in the public interest to require as a condition to the entry of, and as a part of the commission's order granting this application, that such order shall terminate unless:

(1) Application for renewal of this order is made within sixty days prior to any alteration in the terms of Reading's lease with Consumers Gas Company, the issuance of any securities by Reading other than notes maturing in less than one year, or the operation or acquisition by Reading of any utility assets or securities of a public utility or holding company; and

(2) Application for renewal of this order is made immediately subsequent to any default in payment of any instalment of rent by Consumers Gas Company for a period of thirty days after such rent is due and payable.

Re Reading Gas Co. (File No. 31-445, Release No. 2175).

Intervention Denied in Natural Gas Case

SEVERAL applications by parties not engaged in the production, transmission, or distribution of natural gas, and not presently operating any facilities for such purposes, for permission to intervene in proceedings before the Federal Power Commission relating to the Tennessee Gas & Transmission Company were denied. But the privilege of participating was granted.

The parties seeking to intervene were coal operators' associations, a railway labor executives' association, and Alabama Coals, Inc. The commission said that participation by these parties as interveners and as parties had not been shown to be necessary in view of the fact that under § 7(c) of the Natural Gas Act, pursuant to which an application of Tennessee Gas & Transmission Company had been filed, the commission does not have unlimited jurisdiction, but a certificate of public convenience and necessity is required to be obtained from the commission only when a natural gas company undertakes the construction or extension of facilities for the transportation of natural gas to a market in which natural gas is already being served by another natural gas company. *Re Tennessee Gas & Transmission Co. (Docket No. G-165).*

Senior Securities to Retire Common Stock

ALTHOUGH the Wisconsin commission said that it did not favor the retirement of common stock by the issuance of senior securities, it approved a proposal for security issues for refinancing where it did not find anything in the proposal contrary to the provisions of the recently amended Wisconsin statutes.

In substance, the purpose of a $1,100,000 bond issue was to retire $552,000 of bonds and $485,000 of common stock, and to provide $63,000 of additional funds for other corporate purposes. There would then remain $715,000 of common stock of the par value of $100 per share, which the company proposed to retire by the issuance of a like amount of class A common stock of $10 per share.

Concurrently, the company proposed to issue $85,000 of class B non-

voting stock to the holders of the new $715,000 of class A common stock as a stock dividend.

The commission said:

> The issuance of $1,100,000 of bonds will result in a debt ratio of 58 per cent to total capitalization as compared to a ratio of 31 per cent at the present time and a common stock ratio of 42 per cent compared to 69 per cent of the present capitalization. However, the company proposes to retire $25,000 principal amount of bonds annually, which will gradually bring the bond ratio to a more conservative percentage.
>
> This is the first application by the company under the special act of the legislature quoted above and an analysis of the act indicates that the commission lacks some of the jurisdiction and is required to make different statutory findings than are required under the provisions of Chap. 184 of the statutes regarding security issues of public service corporations.

Re Wisconsin Valley Improvement Co. (2-SB-159).

Charge While Telephone Service Denied Is Matter for Commission Decision

An attorney whose service had been denied for nonpayment sued the telephone company in his own behalf and in behalf of all other persons similarly situated for an accounting, declaration of rights, injunction, and $3,000 general damages for him. Mr. Justice Love, of the New York Supreme Court, dismissed the action on the ground that the rate question was exclusively a matter for the commission to decide.

The complaint alleged that during the period from February 16, 1940, to March 15, 1940, the subscriber's telephone service was shut off by reason of his failure to pay for it. Among the items was one for exchange service from February 16th to March 15th, inclusive. The complaint alleged that the company could not properly charge for that period and that this charge, which he said he was forced to pay, should be refunded. He claimed that others were similarly situated.

The charge was claimed to be in excess of the fair and reasonable value for the service, and therefore in violation of law. The complaint stated that the charge was made pursuant to the schedules of rates and regulations filed by the company with the commission, and it was said that the company had at all times conducted, and was conducting, its business and making its charges to subscribers under a schedule of rates and regulations filed with the commission.

The claim for damages to the attorney's profession and reputation with all else, declared the court, clearly showed that it was his own action based on a claim that the one item was excessive. It was said to be doubtful if there were others "similarly situated" in the legal sense. The complaint was dismissed on the ground that all rates, schedules, rules, and regulations of telephone companies must be filed with the commission; that rates must be charged by the companies without refund or remission; and that the commission is the forum, not the courts. *Clay v. Rochester Telephone Corp.*

Exportation of Natural Gas Permitted

The Federal Power Commission, pursuant to § 3 of the Natural Gas Act, authorized the Iroquois Gas Corporation to export natural gas from the United States to the province of Ontario, Canada, subject to terms and conditions.

On July 13, 1939, by Executive Order No. 8202, issued by the President of the United States, authority was delegated to the commission to receive applications for Presidential Permits for the construction, operation, maintenance, or

connection, at the border of the United States, of facilities for the exportation of natural gas to a foreign country, and to make recommendations to the President with respect to the issuance of such permits.

The company had obtained such a permit by this procedure.

The commission found that the gas was not needed to supply the requirements of applicant's consumers in the state of New York; that its exportation did not impair the ability of the applicant to render adequate service to consumers in New York; and that exportation would not be inconsistent with the public interest.

The order provided that authority was reserved in the commission to require reports with respect to gas exportation and to modify, from time to time, or to terminate, the authorization after opportunity for hearing. Assignment of the authorization without commission approval was prohibited. It was further provided that the authorization should not deprive any state or state regulatory commission of its authority; that the authorization should not be construed as an acquiescence in any property valuation, rate schedules, or operating statements; and that authorization should terminate automatically upon the termination or expiration of the contract for exportation of gas, subject, however, to renewal of the authorization upon appropriate findings by the commission. *Re Iroquois Gas Corp. (Docket No. G-111).*

Other Important Rulings

THE Securities and Exchange Commission approved a declaration pursuant to § 7 of the Holding Company Act regarding the guaranty by a registered holding company of bonds assumed by a subsidiary corporation. Since the declaration was approved, it was found unnecessary to decide whether the declarant was entitled to an exemption of the securities under § 6(b) of the act. *Re Washington Railway & Electric Co. (File No. 70-69, Release No. 2142).*

The withholding of C.O.D. charges collected by a carrier for shippers was held by the Pennsylvania commission to constitute ground for revocation of the carrier certificate. *Public Utility Commission v. Robinson Brothers Transfer Co. (Complaint Docket No. 13308).*

The Pennsylvania Superior Court held that the commission had no jurisdiction, after the abandonment of a railroad, to order the removal of rails, ties, and bridges from crossings over highways and the restoration of highway service; nor could the commission require a trustee in reorganization under the Bankruptcy Act to carry into effect an order having no relation to the operation of the railroad or the furnishing of service, but confined to matters arising subsequent to abandonment. *Jennings, Trustee, v. Public Utility Commission et al.*

The supreme court of Illinois dismissed an appeal from a judgment setting aside an order of the Illinois Commerce Commission which granted a certificate for motor truck operations, in view of the fact that statutory amendments had taken jurisdiction from the Illinois Commerce Commission and conferred jurisdiction over motor truck operation upon the department of public works and buildings. The questions presented were said to be no longer justiciable; the right to operate as a carrier of property would now be dependent upon compliance with the Illinois Truck Act. *Railway Express Agency, Inc. et al. v. Illinois Commerce Commission et al. 28 NE(2d) 116.*

NOTE.—The cases above referred to, where decided by courts or regulatory commissions, will be published in full or abstracted in *Public Utilities Reports.*

PREPRINTED FROM

Public Utilities Reports

COMPRISING THE DECISIONS, ORDERS, AND RECOMMENDATIONS OF COURTS AND COMMISSIONS

VOLUME 34 PUR (NS) NUMBER 4

Points of Special Interest

Titles and Index

TITLES

INDEX

WASHINGTON DEPARTMENT OF PUBLIC SERVICE

Department of Public Service of Washington

v.

Pacific Telephone & Telegraph Company

[Nos. F.H. 7160, 7163, 7251, 7229.]

King County

v.

Pacific Telephone & Telegraph Company

[No. F.H. 7213.]

Depreciation, § 38 — Reserves — Separation for state.

1. The balance in the depreciation reserve of a telephone company applicable to the total properties in the state should be set up in a separate account and subsequent debits and credits be made thereto in such fashion as to enable the company at all times to report to the Department in detail the essential facts with reference to the depreciation reserve applicable to the state, where the company operates in more than one state, p. 202.

Valuation, § 290 — Working capital — Basis for claim.

2. A claim for working capital in the total amount of certain current assets does not indicate the actual needs of the company because it simply reflects sums on hand which may be carried at their respective amounts as a mere matter of policy, and, furthermore, a cash item included may include accumulations for payment of interest, dividends, or other corporate purposes which have no place in a rate proceeding, p. 203.

Valuation, § 289 — Working capital — Elements included.

3. The working capital allowance should be that amount necessary to enable a company to meet its current payrolls and other expenses until such time as its current collections from its customers are sufficient to provide for these purposes, p. 203.

Valuation, § 317 — Working capital — Telephone company.

4. Working capital of a telephone company collecting a considerable portion of its revenues in advance of the rendition of service was computed at one-twelfth of the annual operating expenses, plus the average of the materials and supplies on hand, p. 203.

Expenses, § 109 — Taxes — Payment or accrual date.

5. Taxes for a certain year should be included on the basis of their applicability to that year, regardless of when paid, instead of including only taxes accrued during the year, p. 203.

Expenses, § 114 — Federal income tax — Basis — Dividends from other company.

6. A telephone company's operating expense statement for the state in which rates are being investigated should not include a portion of the Federal income tax on dividends received by it from a company in another state, when the other company is in effect a mere operating division, apparently existing as a separate corporation because of a franchise requirement, p. 204.

Depreciation, § 6 — Right to allowance.

7. A telephone company is entitled to earn and to charge to operating expense, by reason of accruing annual depreciation in plant and property, an amount to replace or restore the capital lost through such depreciation, p. 204.

Depreciation, § 77 — Telephone property.

8. An allowance of no more than 3.77 per cent of a telephone company's investment in depreciable property, or 3.425 per cent of the total plant in service, was held to be a reasonable annual accrual for depreciation in the state, p. 204.

Expenses, § 49 — Pension accruals.

9. Pending further examination of the entire pension problem of a telephone company and pending action by the Federal Communications Commission, the company was authorized to charge to current operating expenses only such sums as might be obtained by the application of a normal accrual rate, providing for payment of pensions in excess of those payable under the Social Security Act, but making no provision for unfunded reserve requirements to provide for a shortage of funds on account of employees who were in service prior to the inception of the pension plan, p. 205.

Expenses, § 87 — Payment to parent company — License agreement — Telephone company.

10. Payments by a telephone company to a parent company of a percentage of gross revenues under a license contract providing for the furnishing by the parent company of various services and for the use of patents should be disallowed as an operating expense when the telephone company fails to show the cost directly incurred for its benefit and otherwise fails to support the operating expense allowance asked as required by Chap. 152, Laws of Washington, 1933 (Rem. Rev. Stat. § 10440, 1 to 4), p. 209.

Expenses, § 11 — Nonrecurring items.

11. Nonrecurring expenses made in connection with a telephone company's proposed measured service rate and extended service rate area plan, not indicative of normal operation, should not be included in a determination of operating expenses for rate-making purposes, p. 214.

Telephones, § 2 — Uneconomical operation — Partial dial and partial manual equipment.

12. A telephone company may be justly criticized for continuing the uneconomical method of operation of partial dial and partial manual in any exchange for a period of as long as twenty years, p. 214.

Expenses, § 140 — Prospective savings — Telephone company — Dial operation.

13. The Commission must give full consideration to the savings that can and will accrue during the next few years by converting presently manually operated central offices of a telephone company to dial operation, p. 214.

Rates, § 591 — Telephones — Tolls — Board-to-board basis.

14. Adoption of the board-to-board basis for making telephone rates would not only encroach upon the field of Federal regulation but would also violate sound principles of rate making, since the board-to-board basis discriminates against the small and occasional users of toll service in favor of large users, and it also discriminates in favor of pay-station users because the same charge is made for a toll call whether it is originated at a public pay station or at a subscriber station, p. 218.

Apportionment, § 39 — Telephones — Exchange and intrastate tolls.

15. Toll service should be considered as originating at a telephone station and terminating at another, and the expenses should include all costs directly incurred in its rendition, plus a fair proportion of operating costs incurred jointly by toll and other services, in developing reports to show separately the exchange and intrastate toll operating results, p. 218.

Expenses, § 89 — Rate case expense — Investigation assessment.

16. The amount representing bills of the Department for the cost of its investigation assessed to a telephone company in accordance with statutory authority should be added to the nonrecurring rate case expense, p. 220.

Expenses, § 92 — Rate case expense — Amortization.

17. Rate case expenses of a telephone company were required to be amortized over a period of ten years, p. 220.

Valuation, § 413 — Evidence as to prices — Reproduction cost — Affiliated companies.

18. It is essential to determine whether or not prices used by telephone company engineers in compiling an appraisal of its properties are in fact reasonable and also whether the prices actually paid for such materials have been reasonable, when the engineers base a reproduction cost estimate upon prices of an affiliated manufacturing company, p. 223.

Valuation, § 82 — Accrued depreciation — Elements — Inadequacy — Obsolescence — Requirements of public authorities.

19. The factors which cause depreciation include not only wear and tear, the action of the elements, and similar causes of deterioration, but also such functional causes as inadequacy, obsolescence, and the requirements of public authorities, p. 226.

Valuation, § 101 — Accrued depreciation — Observation method.

20. Little weight can be given to claims for accrued depreciation based upon inspection of samples of plant and property and observation of certain conditions which cause them, without regard to functional depreciation shown to exist in the plant, p. 226.

Valuation, § 104 — Accrued depreciation — Reserve as measure.

21. The depreciation reserve found assignable to the state in which a telephone company's rates were being investigated was used as the proper measure of depreciation in the absence of proof as to the amount of accrued depreciation presently existing in the plant, p. 226.

Return, § 111 — Telephone company.

22. A return of 8.6 per cent for a telephone company was held to be unreasonable, unjust, excessive, and unlawful; but a return somewhat in excess of 5 per cent was held to be reasonable, p. 227.

Rates, § 186 — Reasonableness — Burden of proof.

23. The burden of proof justifying the reasonableness of proposed rate schedules is, as a matter of law, upon the company, p. 228.

(GARRISON, Supervisor of Public Utilities, concurs.)

[July 6, 1940.]

INVESTIGATION *of proposed telephone rates; increases in rates disapproved.*

APPEARANCES: John A. Kavaney, Assistant Attorney General, Albert E. Stephan, Frank B. Warren, and Carl I. Wheat, for the Washington Department of Public Service.

Arthur T. George, Winlock Miller, Jr., A. G. Paine, and Otto B. Rupp, for the Pacific Telephone and Telegraph Company.

Harry A. Bowen, King county, Washington; Jas. W. Bryan, Jr., city of Bremerton; H. Carothers, city of Tacoma; H. S. Dawson, city of Bellingham; G. A. B. Dovell, Pierce County Economic Security League and School District No. 10; B. A. Farley, city of Spokane; G. M. Ferris, city of Spokane; C. R. Lewis, city of Shelton; J. P. McGlinn, city of Bellingham; J. A. Newton, city of Seattle; H. L. Olsen, city of Yakima; F. M. Reischling, King county; L. W. Shorett, King county; F. A. Smith, Pierce County Economic Security League and School District No. 10; A. C. Van Soelen, city of Seattle; B. Gray Warner, King county; Ross Watt, city of Port Orchard and Port Orchard Chamber of Commerce; and G. E. Wilson, city of Seattle, for various municipalities, counties, and other governmental agencies of the state of Washington.

Travis Ayer, South Central Telephone Association; A. J. Barash, Washington State Hotel Association; Mary A. Blair; Everal Carson, Minnehaha Co-op Telephone Company; Frank Chervenka, Washington Rural Lines; G. E. Clarke, Telephone Users League of Washington, Inc.; W. B. Clark, Yakima Chamber of Commerce; R. W. Clifford, West Coast Telephone Company; Lorenzo Dow; H. E. Dupar, Seattle Hotel Association; T. T. Grant, Spokane Valley residents; Elmer E. Healey, Washington Rural Lines; Harry Henke, Jr., Telephone Users League of Washington, Inc.; A. H. Henry, North End Federated Clubs and Stella Heard et al, and North End Federated Clubs and Seattle Telephone Users League; Fred Herbert, Ridgefield Telephone Company; C. N. Ingraham, Lake Forest Park Civic Club; H. H. Johnston, Dash Point and Brown's Point; F. J. Lordan, Truck Owners Association of Seattle; J. W. McCune, Tacoma Chamber of Commerce; F. W. Moore, Silverdale-Chico Committee; R. D. Ogden, Telephone Users

League and V. A. Cole et al., King county, and Seattle Telephone Users League; Gladys Petry, Tacoma Business and Professional Women; B. D. Riley, The Merchants Exchange, Seattle; G. R. Stuntz, Telephone Users Protective Association; L. Teats, KMO Inc., KIT and Pacific Broadcasting Company; W. B. Uhlmann, Telephone Users League of Washington, Inc., for various telephone subscriber groups, business and professional organizations, chambers of commerce, other users and individuals.

TITLES AND ABBREVIATIONS

Proper Title	*Abbreviations*
1. The Pacific Telephone and Telegraph Company	the Pacific Company or the company
2. American Telephone and Telegraph Company	the American Company
3. Western Electric Company	Western
4. Bell Telephone Laboratories, Inc.	the Bell Laboratories
5. Long Lines Department of the American Telephone and Telegraph Company	the Long Lines
6. Washington Department of Public Service	the Department

History of Proceedings

Each of the above numbered and entitled matters finds its inception in tariff schedules filed with this Department by the Pacific Telephone and Telegraph Company, a public utility operating, among other things, an exchange and toll telephone business in the state of Washington, subject to the jurisdiction of this Department. Cause No. F. H. 7160 involves tariffs[1] originally filed on June 22, 1938, providing in general for the passing on to customers within certain cities of municipal occupation license taxes levied by such cities,[2] and providing further for certain increases in message toll telephone rates on intrastate routes exceeding 56 miles airline distance. These tariffs were first suspended by order of this Department dated June 25, 1938, under the provisions of law relative to such suspension (Rem. Rev. Stat., § 10424), and by successive stipulations the suspension date was advanced to January 10, 1940. On January 9, 1940, the company withdrew the tariffs so filed, but on January 12, 1940, the identical tariff sheets were refiled naming February 12, 1940, as the effective date. These refiled tariffs were suspended on January 27, 1940, until further order of the Department, under the original cause number (F. H. 7160). Under the terms of the statute this suspension would expire on September 12, 1940. By order of the Department, and as a result of agreement of the parties, the evidence and exhibits which had been received in the hearings held prior to January 10, 1940, were incorporated in the hearings which resumed April 16, 1940, as the direct evidence in chief of the company, and as a part of the evidence offered by the other parties.

Cause No. F. H. 7163 involves tariffs[3] originally filed on June 27, 1938, proposing extensive changes in rates and service in the utility's Seattle ex-

[1] Sheets 42747 to 42749, inclusive, W.D.P.S. No. 5, Advice No. 392, and Sheets 42750 to 42754, inclusive, W.D.P.S. Nos. 5 and 6, Advice No. 393.

[2] Such municipal occupation taxes are levied by the cities of Bellingham, Dayton, Olympia, Seattle, Spokane, Shelton, and Port Townsend, and are based on revenues collected for intrastate services within such cities, respectively.

[3] Sheets 42755 to 42855, inclusive, W.D.P.S. Nos. 5 and 6, Advice No. 394.

change estimated to result in a large net increase in revenue. These tariffs were originally suspended on June 29, 1938, and by successive stipulations their final suspension date was also advanced to January 10, 1940. On January 9, 1940, these tariffs were withdrawn by the company. They were refiled and suspended under Cause No. F. H. 7163 under the exact procedure described above for Cause No. F. H. 7160, and on the same dates.

Cause No. F. H. 7251 involves tariffs[4] originally filed on May 10, 1939, proposing general increases in exchange rates for this utility's system throughout the state of Washington, other than in its Seattle exchange, and excepting also Clarkston, Washington, which is a part of the Lewiston, Idaho, exchange. These tariffs were originally suspended on May 19, 1939, until January 10, 1940. On January 9, 1940, these tariffs were withdrawn by the company. They were refiled and suspended under Cause No. F. H. 7251 under the exact procedure described above for Cause No. F. H. 7160, and on the same dates.

On the basis of its 1938 business, the company's estimate of total gross revenue increases to be expected from the application of the rates proposed in these three filings is $1,398,853.52.

On March 31, 1939, this Department instituted an investigation upon its own motion (Cause No. F. H. 7229), bringing in question in a single proceeding all of the rates and practices of this utility for its intrastate telephone services within the state of Washington. Complaints (Cause No. F. H. 7213) by King county against this utility were filed with the Department on November 5 and November 26, 1938, bringing in question, certain expenditures made by the company in anticipation of the introduction of additional measured telephone service in its Seattle exchange under the tariffs at issue in Cause No. F. H. 7163.

These several causes have been heard and submitted. Cause No. F. H. 7160 came on for hearing on July 28, September 20, and September 29, 1938, and Cause No. F. H. 7213 was separately heard on January 12, 1939. Subsequently, on June 14, 1939, this Department, by order, consolidated Causes Nos. F. H. 7160, 7163, 7251, and 7229 for hearing. These matters came on for hearing on June 22, 1939, at which time Cause No. F. H. 7213 was also consolidated with the other four causes for hearing. In total, there have been ninety days of hearing on the matters now at issue—the hearings concluding on May 1, 1940. Some five hundred exhibits have been filed, and about ten thousand typewritten pages of testimony have been adduced. This is by far the most complex case and the most voluminous record which this Department has ever had before it.

In the within opinion, the issues presented in Causes No. F. H. 7160, No. F. H. 7163, No. F. H. 7251, and No. F. H. 7213 will be discussed.

The Immediate Issues

The three suspension proceedings (Nos. F. H. 7160, 7163, 7251) are governed by the provisions of § 10424

[4] Sheets 44282 to 44685, inclusive, W.D.P.S. Nos. 5, 6, and 7, Advice No. 432.

Rem. Rev. Stat. which provides as follows:

"Whenever any public service company shall file with the Department of Public Service any schedule, classification, rule, or regulation, the effect of which is to change any rate, fare, charge, rental, or toll theretofore charged, the Department shall have power, either upon its own motion or upon complaint, upon notice, to enter upon a hearing concerning such proposed change and the reasonableness and justness thereof, and pending such hearing and the decision thereon the Department may suspend the operation of such rate, fare, charge, rental, or toll for a period not exceeding seven months from the time the same would otherwise go into effect, and after a full hearing the Department may make such order in reference thereto as would be provided in a hearing initiated after the same had become effective. At any hearing involving any change in any schedule, classification, rule, or regulation the effect of which is to increase any rate, fare, charge, rental, or toll theretofore charged, the burden of proof to show that such increase is just and reasonable shall be upon the public service company . . ."

The fundamental issue for us to determine therefore is: *Has the Pacific Telephone and Telegraph Company sustained the burden of proof in showing that its proposed increases are just and reasonable?*

Additional issues are raised under the two other causes now before the Department. All phases of this public utility's telephone rates, services, and operations, in so far as they are covered in this record, are before us for consideration and determination in our general investigation (No. F. H. 7229), and certain expenditures by the company for the purpose of putting into effect measured telephone service in the Seattle exchange area are separately presented for determination in connection with the complaint filed by King county (No. F. H. 7213). All these five matters were consolidated for hearing.

The record in these several matters is unusually complete. It is the Department's opinion that it affords ample basis for the findings contained in this opinion, as well as for the separate orders which will follow.

Résumé of Operations under Consideration

The Pacific Telephone and Telegraph Company was incorporated in California on December 31, 1906, and is the result of the consolidation, merger, acquisition, and development, over many years, of numerous separate telephone properties and corporations. Since the incorporation of the present company, control has resided in the American Telephone and Telegraph Company of New York which, as of December 31, 1939, held 78.17 per cent of the Pacific Company's outstanding preferred stock, and 85.80 per cent of its common stock. The Pacific Company in turn owns all of the outstanding shares of stock of the Southern California Telephone Company and of the Bell Telephone Company of Nevada. It offers, among other things, exchange and intrastate toll telephone services in its various areas of service within the states of Washington and Oregon, the northern portion of California, and a portion

of the state of Idaho; it affords similar services through its subsidiaries in the state of Nevada and the southern portion of California; and it also operates interstate toll service throughout its area, as well as toll service to other states, and to areas not served by it within its own territory, through connections with other Associated Bell Companies, the Long Lines Department of the American Company and with the systems of numerous independent telephone companies, not affiliated with it or its parent corporation. The Pacific Company is one of the score or more Associated Bell Telephone Companies under the general control and supervision of the American Company.

At the date of its incorporation the Pacific Company had an authorized capital of $50,000,000 of which $32,000,000 (par value) was preferred stock[5] and $18,000,000 (par value) was common stock.[6] The authorized bonded indebtedness at that date was $35,000,000. Tangible assets, however, totaled only approximately $32,500,000, but by 1915 the company's total assets, including investments in affiliated corporations, had grown to $108,519,880, and by 1939 were no less than $459,507,670. It is now the second largest subsidiary of the American Company, and is the second largest operating telephone company in the United States, being surpassed in assets only by the New York Telephone Company, another Bell System corporation.

In the state of Washington the Pacific Company's present telephone system is also the result of numerous consolidations, mergers, and purchases, as well as of the general growth of this essential business in a rapidly developing community. In 1915 the company's reported book cost of operating property in Washington was $17,457,778, whereas by 1925 it had grown to $41,110,561, and as of the close of 1939 the company's books showed Telephone Plant in Service of $68,267,940. The depreciation reserve upon property in this state has likewise grown from small beginnings to approximately $25,447,500 in 1939, the major portion of which is conceded to be invested in plant in the state of Washington. Over the entire period 1915 to 1939, inclusive, the company has earned in this state, an average return of 5.22 per cent upon its book cost, less the depreciation reserve (plus a reasonable allowance for working capital calculated by the Department's accountants).

As of December 31, 1938, there were 254,218 Pacific Company telephone stations in the state of Washington, of which no less than 186,534, or 73.4 per cent of the total, were concentrated in the three exchanges of Seattle, Spokane, and Tacoma. Moreover, 123,752, or 48.7 per cent of the total, were located in the Seattle exchange alone. Local service revenues from company-owned stations[7] during

[5] This stock was 6 per cent cumulative, noncallable, preferred as to assets and with equal voting rights with common stock, and has so remained through all subsequent issues to the present date.

[6] This was wholly "good will stock," and at the time of incorporation was represented by no tangible assets. In 1925 shares representing $10,000,000 in par value of such stock were returned by the American Telephone and Telegraph Company and were canceled by the Pacific Company.

[7] Some 9,700 service ("farmer line") stations, though connected to Pacific Company

1938 amounted to $10,783,603.83, of which Seattle, Spokane, and Tacoma together contributed $8,659,788, or 80.3 per cent of the total. Of this amount, $6,019,840.64, or 55.8 per cent, was received from Seattle exchange operations alone. The large part which these Seattle operations play in the company's entire business in this state is therefore apparent. Of the Seattle residence main stations, 42,451, or 63 per cent, were on 4-party lines,[8] and the majority of the business service in that exchange is on a flat-rate schedule.

The multistate nature of this public utility creates numerous regulatory problems not ordinarily presented in the case of utilities whose entire service areas lie within a single jurisdiction. Allocations and prorates of general corporate expenses to the several states served by the company give rise to certain issues, and it also becomes necessary to segregate the property, revenues, and expenses of the company's interstate operations before adequate data can be secured in respect to the intrastate services which are subject to this Department's authority. This problem of segregation (or "separation," as it is generally termed in respect to telephone operations) will be discussed in detail later in this opinion.

As a part of its claims for increased rates, the company submitted exhibits setting forth the fixed capital investments, revenues, and expenses as shown by its books for the year 1938. Data of a similar character were submitted in the form of estimates for the year 1940 under present rates, as well as under the company's proposed rates.[9] No data were submitted by the company for the year 1939, but the results for that year, together with summaries for 1940, were prepared by the Department's chief accountant, A. J. Greer. A summarization of this infomation will be found following this discussion.

The data were compiled from page 93 of Exhibit C–446 and represent, with certain exceptions hereinafter discussed, unadjusted company book figures for 1939 and the unadjusted company estimates for 1940.

Assumed rate bases used in the preparation of the aforementioned operating data were computed by deducting from the average book cost of property, the average depreciation reserve. To this balance there was added the working capital allowance calculated by the Department's staff. This computation is shown in the following tabulation, wherein there also appears the apportionment of the assumed rate bases to intrastate business:

lines, are not owned by that company, and are therefore not included in the totals of "company-owned stations," nor are government stations (so connected) included.

[8] On the same date there were 16,364 2-party, 5,629 single party, and 2,923 suburban main stations in the Seattle exchange.

[9] Included in Exhibit C–332, the company's estimate of expected revenues under the proposals, were calculations of the increased amounts that would be received if the full rates were to be applied to certain charitable and eleemosynary institutions, ministers of religion, Y.M.C.A.'s, Y.W.C.A.'s, etc., now served at reduced rates. Whether the company withdraws such reduced rates is a matter of policy for the company to determine. Under § 10376, Rem. Rev. Stat. we have no statutory authority over this matter.

COMPUTATION OF UNADJUSTED ASSUMED RATE BASES FOR INTRASTATE TELEPHONE OPERATIONS

		Year 1940	
	Year 1939	Under Present Rates	Under Proposed Rates
Average Plant	$59,253,339.60	$60,606,935.86	$61,496,554.98
Average Reserve for Depreciation*	21,391,221.89	22,331,245.75	22,386,968.02
Average Plant less Average Depreciation Reserve	37,862,117.71	38,275,690.11	39,109,586.96
Allowance for Working Capital	1,312,324.49	1,331,964.13	1,340,179.31
Assumed Rate Base†	39,174,442.20	39,607,654.24	40,449,766.27

* Reserve calculated by averaging first and last of year balances.

† Average Plant in Service (a/c 100.1) less average reserve for depreciation plus allowance for working capital.

The figures shown on this tabulation for "Average Plant" include only that group of accounts under the classification of Telephone Plant in Service. Other accounts, which include property not presently used or useful in rendering telephone service, have not been added although they are included in the company's exhibits. Metering equipment not considered used or useful in rendering telephone service under present rates is included only in Telephone Plant in Service in the estimate for 1940 under proposed rates.

The reserve for depreciation, used as a deduction from the average plant in the above tabulation, is the amount calculated by the Department's staff to be applicable to property in service in the state of Washington, and is discussed on pages 75 to 83, inclusive, of Exhibit C–446. It appears, from this discussion, that prior to 1915 no records were kept by the company to show separately the amount of the total company reserve applicable to this state. It was, therefore, necessary to apportion the balance then in existence, which was done on the basis of the percentage which the depreciable property in this state bore to the total company depreciable property.[10] Subsequent to 1915, the company has kept separately the annual debits and credits to the reserve for the state of Washington. The increment resulting from these debits and credits, plus the apportioned balance in 1915, amounts to what may be termed the actual historical reserve of the company today, since the apportioned part represents only a negligible percentage of the total.

[1] The balance in the depreciation reserve as of December 31, 1939, applicable to the total properties in this state amounts to $25,447,533.08. It is our opinion that this amount should be set up in a separate account as of that date and that subsequent debits and credits be made thereto in such fashion as to enable the company at all times to report to the Department in detail the essential facts with reference to the depreciation reserve applicable to the state of Washington. This information is not only essential in the present proceeding but it is an element without which continuous reg-

[10] Mr. Greer testified that subsequent to the preparation of Exhibit C–446 the company furnished information correcting data previously furnished regarding the depreciable property in the state of Washington in 1915. This information resulted in increasing the apportionment of the balance then in the Reserve for Depreciation to this state in the amount of $93,624.15. The original figures with respect to this apportionment which appears on page 76 of Exhibit C–446 were corrected in the record and such correction has been incorporated in the figures appearing herein.

ulatory scrutiny of the future affairs of the company will be greatly limited. The reserve for depreciation is not only helpful in the determination of value but also affords an additional measure of reasonableness of the company's annual charges for depreciation expense.

No valid reasons for failure to carry a separate reserve for depreciation for this state were advanced by company witnesses when interrogated on this subject.

[2–4] The working capital allowance, as shown in the foregoing computation of assumed rate bases, is the amount calculated by the Department's staff and discussed on page 61 of Exhibit C–446. The company, in several of its exhibits, presented a claim for working capital in the total amount of certain of its current assets, which include accounts due from subscribers and agents, materials and supplies, cash on hand, and so forth. This method is not indicative of the actual needs of the company because it may simply reflect sums on hand which may be carried at their respective amounts as a mere matter of policy. Furthermore, the cash item may include accumulations for payment of interest, dividends or other corporate purposes which have no place in a rate proceeding. It is our view that the working capital allowance should be that amount necessary to enable the company to meet its current payrolls and other expenses until such time as its current collections from its customers are sufficient to provide for these purposes. In view of the fact that a considerable portion of this company's revenues are collected in advance of the rendition of service, it is believed that the allowance computed by the Department's staff of one-twelfth of the annual operating expenses, plus the average of the materials and supplies on hand, fulfills all requirements and results in a liberal allowance.

[5] In addition to the foregoing differences between figures shown by the company's exhibits and those shown on page 93 of Exhibit C–446, which are to be presently summarized herein, taxes for the year 1939 have been included on the basis of their applicability to that year, regardless of when paid. In the company's exhibits, only taxes accrued during the year are included.

All of the figures on page 93 of Exhibit C–446 are shown after minor net transfers, between states, of jointly used property, and the expenses and revenues associated therewith, which is in accordance with the procedure followed by the company preparatory to the separation of its operations between its interstate and intrastate business.

With the foregoing exceptions, which are not considered adjustments, together with the indicated rearrangements of certain data, the figures as shown in Exhibit C–446, page 93, are the unaltered book figures of the company for 1939, and the unaltered estimates presented by the company for 1940.

A summarization of these data is presented herewith. The allocations to intrastate telephone operations, as thereon shown, were made on the basis of the company's separation methods as described in Exhibits C–8 and C–9, and the percentages used were

derived from Exhibits C–265 to C–320, inclusive:

UNADJUSTED OPERATING DATA—INTRASTATE TELEPHONE OPERATIONS

	1939 Present Rates	1940 Est. under Present Rates	1940 Est. under Proposed Rates
1. Revenues	$13,684,766.00	$14,321,236.36	$15,813,100.28
2. Total Deductions * from Revenues	12,701,921.00	12,741,375.64	12,902,808.16
3. Operating Income	982,845.00	1,579,860.72	2,910,292.12
4. Assumed Rate Base (Plant in Service Less Dep. Res. plus Working Capital)	39,174,442.20	39,607,654.24	40,449,766.27
5. Per cent of Line 3 to Line 4	2.51%	3.99%	7.19%

* This includes Operating Expenses, Taxes, and Depreciation.

Adjustments to Company Book Data

A review of the evidence before us indicates the necessity of making certain adjustments of the company's book data in order to determine the reasonableness of the company's earnings under its present rates and the earnings that would be had if the proposed rates were granted. These adjustments which are discussed below involve Federal Income Tax, Depreciation Expense Accruals, Pension Expense, License Contract Expense, Nonrecurring Expenses, Separation, and Amortization of Rate Case Expense. In addition there is set forth a review of the company's dial conversion program and the savings in operating expenses resulting from its completion.

Federal Income Tax on Dividends from the Southern California Telephone Company

[6] The company's operating expense statements for the state of Washington include a portion of the Federal Income Tax on dividends received by it from the Southern California Telephone Company. That corporation is in effect a mere operating division of the Pacific Company, but apparently exists as a separate corporation because of a franchise requirement of the city of Los Angeles. A portion of the income tax paid upon these dividends is allocated to the state of Washington on the basis of net operating income before Federal Income Tax. However, if the Southern California Telephone Company were in fact not a separate corporation, but an operating division of the Pacific Company, the income tax on profits from that division, under the company's accounting procedure, would be charged or prorated directly to that division. Certainly it should not be charged to the other operating divisions. It seems to us improper, therefore, to allocate to the company's state of Washington operations any portion of this income tax on dividends received by the Pacific Company from the Southern California Telephone Company, and an adjustment of the company's book data to reflect the amounts so charged will therefore be made. The amounts of these tax adjustments assigned to intrastate telephone operations are as follows:

1. 1939	$12,715.33
2. 1940 under present rates	19,040.20
3. 1940 Proposed rates in full effect	32,532.15

Annual Depreciation Expense

[7, 8] We must allow this company to earn and to charge to operating expense by reason of accruing annual depreciation in plant and prop-

erty an amount to replace or restore the capital lost through such depreciation. We have considered the evidence given by all of the witnesses relating to this item of expense, and we have been forced to the conclusion that the company's estimate of the service lives and salvage for large and important classes of property are too low and that annual accruals calculated therefrom are too high. The record shows numerous instances where the company's figures are unreliable or subject to serious question.

We are examining this entire matter and we shall dispose of it in detail in our order in Cause Number F. H. 7229, this Department's general rate and service investigation of the Pacific Company.

We are of the opinion, however, and we therefore find that no more than 3.77 per cent of the company's investment in depreciable property, or 3.425 per cent of the total plant in service, should be allowed as a reasonable annual accrual for depreciation in the state of Washington. The amounts of such depreciation adjustments for intrastate telephone service appear as follows:

	Washington Intrastate
1939 Present rates	$253,085.04
1940 Present rates	253,593.95
1940 Proposed rates	257,140.49

The percentage allowed is a maximum figure and we are giving serious consideration to additional adjustments which would result in still further reductions in the company's claimed operating expenses.

Pension Expense

[9] The Pacific Company maintains a pension plan for its employees. It is alleged that expenditures or costs incurred in connection with the operation of this plan are justified since the superannuation problem is one which must be met and that the costs under the Bell plan are reasonable. Since this plan was adopted, the Social Security Act has been passed, which provides pensions to employed persons generally on a scale comparable to that payable under the Bell System plant with respect to all except the higher-salaried group, which constitutes less than 10 per cent of all Bell System employees. Under existing conditions it is proposed that each employee will receive upon retirement the pension payable by the Bell System plus one-half of that payable under Social Security, this latter amount representing, in theory, the employee's contribution to the Social Security fund.

In approaching the problem of justification of expenditures in connection with payment of pensions, the propriety of including in operating expenses amounts designed to provide for payment of pensions to Bell System employees in excess of those payable under the Social Security Act is seriously questioned. One theory which might possibly justify the inclusion of such amounts is that increased efficiency results, through orderly retirement which will be reflected in lowered operating expenses and ultimately in reduced rates. However, this is questionable because the retirement of employees lies entirely within the discretion of the management and should not be dependent upon the pension plan.

There are no actuarial studies ap-

plicable to the Pacific Company alone. All such studies relate to the Bell System generally, and the experience of the Pacific Company or its state of Washington operations may be far different from that of the Bell System, as a whole, or other companies in the system.

Laying aside for the moment the equity of burdening telephone subscribers with the cost of paying pensions in addition to those under the Social Security Act and also laying aside the accuracy of the actuarial studies underlying the determination of what are commonly referred to as "normal accrual rates," there is still the question as to whether the total cost, if proper, has been and is being properly allocated to various accounting periods. Under any method of providing funds for the payment of pensions, the amount ultimately required is the same provided the plan remains unchanged. There are, however, various methods of distributing the cost among accounting periods. Two methods represent the extremes. The first, commonly referred to as the "pay-as-you-go" plan, merely provides for the charge to operating expenses in each accounting period of the amount actually disbursed as pensions during this same period. The other plan, known as the accrual plan, provides for accrual in advance through charges to operating expenses of amounts which will be disbursed in the future in the form of pensions.

The Bell System accounting has been, since January 1, 1928, on the latter basis. This contemplates that there shall be accrued each year, charged to operating expenses and deposited with a trustee, an amount equal to that year's proportion of the total amount, which, with interest, will provide pensions for all employees hired subsequent to the inauguration of the plan.[11] The actuarial rate now used by the Pacific Company to accomplish this purpose is 2.39 per cent of the payroll.

When the full service method of accounting was adopted by the Pacific Company on January 1, 1928, there were many employees with many years of service. Thus the company assumed an obligation to pay full service pensions to retiring employees without having made provision to accumulate the necessary funds for the substantial periods of service theretofore rendered by these employees. In other words under the company's plan the full service rate of 2.39 per cent must be applied to the payroll for the entire number of years the employees are in service and the accumulated fund must earn at the rate of 4 per cent if full retirement pensions are to be accumulated. This means that if the company's actuarial studies are accepted as correct, funds for the personnel employed since the present plan was established are fully provided, but there is a shortage of funds on account of those employees who were in service prior to the inception of the plan. The company was aware of this shortage, commonly referred to as the "Unfunded Ac-

[11] The adoption of this method of accounting carries with it necessarily the assumption that benefits under the plan accrue in direct proportion to wages paid in each accounting period. If benefits under the plan, and by benefits we mean resulting economies and increased efficiency of operation, accrue as benefits are paid, rather than as services are rendered, it would be improper to accrue for pensions in advance.

tuarial Reserve Requirement," at the date of adoption of the present plan in 1928. At that time it amounted to $11,052,784.[12]

This asserted liability has increased each year due to the fact that no interest has been earned on this amount and it is alleged that at December 31, 1936, it had increased to $14,301,990. At that time the Pacific Company took steps assertedly for the purpose of arresting any further growth by increasing the accrual rate from 2.39 per cent to 4.3 per cent.[13] The increase amounted to about 4.5 per cent of the unfunded liability instead of the 4 per cent interest rate which was sufficient to halt any alleged further growth. The excess resulted because the company attempted to relate a fixed factor of interest on a definite sum as a percentage of a fluctuating payroll.

It should be kept in mind that if there does in fact exist an unfunded pension liability the halting of its growth does not eliminate its presence. According to company testimony it has been recognized that complete amortization within a reasonable period of years is necessary particularly for industrial organizations. This theory is based upon the assumption that the business may decline or actually come to an end leaving the employees wholly dependent upon the amounts then in the fund to meet their pension expectations.

Testimony indicates that this situation is not expected to occur with respect to telephone companies and that the only decline may be through temporary adverse business conditions. On this assumption further testimony indicated that a complete program of amortization is not necessary and that with respect to most companies, a program that would prevent further growth in the unfunded actuarial reserve requirement would be sufficient.[14]

Since it is expected that this business will not terminate at any foreseeable future date but instead will continue to grow and expand it appears that there will never be any demand for a complete disbursement of the pension fund. Under these circumstances the normal accrual rate of 2.39 per cent will be sufficient to maintain the fund at a level necessary to supply the needs for the orderly retirement of superannuated employees.

[12] After transfer of the employees benefit fund in 1928 this sum was reduced to $10,161,043.

[13] If at the outset of the adoption of the full service accrual in 1928 steps had been taken to halt the growth in the alleged unfunded actuarial reserve requirement, the amount now necessary to accomplish that purpose for the entire Pacific Company would be $406,442, calculated at 4 per cent of the unfunded after transfer of the employees benefit reserve funds, or $239,616 less than was actually set aside for the year 1939. The Washington proportion of this figure would be approximately $52,000. In other words under the company's present plan the subscribers are called upon to contribute $52,000 more in 1939 merely because the company delayed taking steps to halt the growth in the alleged deficiency for nine years. Calculations which we have developed indicate that had steps been taken towards complete amortization of the unfunded in 1928 that this excess of $239,616 would now, in approximately thirteen additional years, completely amortize the balance then asserted to exist. Certainly in view of this situation there is no economy in the company's present method which will require the ratepayers to contribute these interest charges to infinity.

[14] The record discloses that a program to prevent further growth in the unfunded was recommended for only six of the associated companies by the American Company in 1937. This would indicate that neither a program to halt such growth nor a program of amortization was considered necessary for the remaining seventeen companies.

For these reasons the propriety of any charges whatsoever to the present subscribers resulting from the so-called Unfunded Actuarial Reserve Requirement is seriously questioned.

At this point it may be well to indicate certain statistics with reference to the operation of the Pacific Company pension fund since the adoption of the full service accrual plan. In viewing these statistics it should be kept in mind that this company was organized in 1906, that it had a pay-as-you-go plan as early as 1913 and that the present normal accrual method has been in existence since 1928. These facts give added significance to the considerable difference between the accruals and the actual payments, indicating that it will be many years before the actual payments will exceed the accruals.

1928 to 1939, Inclusive	
Charges for Pension Accruals (Excluding Interest on Unfunded Actuarial Reserve Requirement)	$9,843,345.00
Interest Additions to Funds	3,545,800.36
Other Additions to Fund (Including Interest on the Unfunded)	3,338,728.38
Total Additions to Fund	$16,727,873.74
Actual Disbursements to Pensioners	$2,501,104.34
1939 Only	
Charges for Pension Accruals (Excluding Interest on Unfunded Actuarial Reserve Requirement)	$808,418.00
Interest on the Unfunded Actuarial Reserve Requirement	646,058.00
Interest Additions to Fund	501,121.48
Total Additions to Fund	$1,955,597.48
Actual Disbursements to Pensioners	$408,609.43

It appears that the American Company's pension plan has never been properly explored by any regulatory agency although the Federal Communications Commission now has the matter under consideration. There are many questionable features in connection with the plan which require further scrutiny. The presentation of the matter by Mr. Belcher, assistant chief statistician of the American Company, was unsupported by the presentation of factual data which he stated could be viewed in New York city. The question is raised as to whether there actually exists any shortage of funds by reason of the so-called unfunded actuarial liability. If there is such a shortage is it proper to assess charges resulting therefrom to present-day subscribers since it is apparent that the unfunded liability is a theory which originates from service rendered by employees prior to 1928?

Further question is raised as to the propriety of the normal accrual rates. There is no proof in the record that the American Company's rates may be properly applied to determine the actual costs for the state of Washington. Indeed the Pacific Company itself has never verified the reasonableness of the charges but has merely accepted the recommendations of the American Company, indicating that the matter is not an arms' length transaction.

The further question has been raised and is reasserted here as to the propriety of requiring telephone patrons to support a pension plan which provides for the payment of pensions in excess of those provided by the Federal government under the Social Security Act. Is it reasonable that telephone patrons be compelled to support a pension plan which in some instances provides for payment exceed-

ing $1,500 per month to a single individual?

These and many other questions are raised, and it is, therefore, our considered view that, pending further examination of the entire pension problem of this utility as it affects the state of Washington and pending action from the accounting viewpoint by the Federal Communications Commission (though such accounting ruling would obviously not be binding upon this Department in respect to operating expense allowance in a rate proceeding), this company should not be authorized at this time to charge to current operating expenses any sums other than those which may be obtained by the application of the normal accrual rate of 2.39 per cent. To this end, an adjustment in the amounts set forth below must be made in the company's claims for intrastate telephone operating expenses in the state of Washington.

1. 1939 Present Rates	$114,622.89
2. 1940 Present Rates	114,520.17
3. 1940 Proposed Rates	114,527.76

Adjustment in Respect to "License Contract" Expense

[10] The relationship of the American Company to the corporation whose rates are here at issue is not merely one of parent and subsidiary. By means of a mechanism known as the "license contract" the Bell Telephone System has been welded into a single, closely knit, nationwide unit. Outwardly, this contract is an offer of service and advice for a stipulated compensation; as a matter of fact, this mechanism is, in our opinion, a major instrumentality of control through which the parent corporation maintains complete and continuous supervision and supremacy over its subsidiaries—down to the most minor detail of the operations—and thus protects its position as the holding organism of this nation-wide system. This is not said in any spirit of criticism, and we do not wish to be understood as not recognizing in this arrangement a mechanism of importance and frequently of much value to the Bell subsidiaries. It is merely a statement of fact upon which this record is apparently conclusive.[15]

We are not concerned in these proceedings with the question of whether or not this license contract arrangement is theoretically valid or valuable. The issue before us is whether the license contract payment is lawfully to be included in the Pacific Company's allowable operating expenses in the establishment of rates for telephone service to its subscribers and other patrons in this state.

Briefly stated, the license contract provides for the furnishing by the American Company of engineering, research, legal, accounting, financial, and other services, at a stipulated rate. Among other things, the Pacific Company is licensed to use within its territory certain apparatus covered by patents owned or controlled by the licensor and provision is made for toll connections with other Bell System

[15] Although the American Company's license contract arrangement with the Pacific Company has not at all times followed in form the arrangement with the other Bell operating companies, we are given to understand that it has now been brought into full conformity with the contracts now in force over the system. The present contract, however, has not as yet been brought to our attention for approval, as provided by statute, though it was filed in the instant proceedings as an exhibit.

companies. Payment was formerly set at 4½ per cent of certain Pacific Company gross revenues, but the present compensation stipulated in the contract is 2½ per cent. By written agreement, effective since January 1, 1929, the fee has been limited to 1½ per cent but there is no apparent legal obstacle to increasing such payments to the contract rate, although no such increase was indicated as being contemplated at this time.

Under the provisions of Chap. 152, Laws of Washington, 1933 (Rem. Rev. Stat., § 10440, 1 to 4), the burden of proving the reasonableness of payments by a public utility operating in this state to an affiliated interest is placed upon the utility desiring to make such payment, and this Department is directed to disallow such payment "in the absence of satisfactory proof that it is reasonable in amount." Moreover, the Department is empowered to disapprove or disallow such payment "unless satisfactory proof is submitted to the Department of the cost to the affiliated interest of rendering service or furnishing the property or service. . . ." It is further provided that "no proof shall be satisfactory . . . unless it includes the original (or verified copies) of the relevant cost records and other relevant accounts of the affiliated interest, or such abstract thereof or summary taken therefrom, as the Department may deem adequate. . . ." The statute thus establishes in this state, and even broadens, the rule heretofore recognized in principle by the United States Supreme Court in the case of Smith v. Illinois Bell Teleph. Co. (1930) 282 US 133, 157, 75 L ed 255, PUR1931A, 1, 12, 51 S Ct 65, wherein that court said:

"In view of the findings, both of the state Commissions and of the court (below) we see no reason to doubt that valuable services were rendered by the American Company, but there should be specific findings by the statutory court with regard to the cost of these services to the American Company and the reasonable amount which should be allocated in this respect to the operating expenses of the intrastate business of the Illinois Company in the years covered by the decree."

For the purposes of these proceedings, the license contract payment issue is therefore resolved into the following, to wit, whether adequate and convincing proof has been offered by the Pacific Company in respect to the cost to the American Company of rendering services under this contract specifically related to the Pacific Company's operations in the state of Washington, as well as in respect to whether such amounts are properly chargeable to the operating expenses of the Pacific Company in this state.

In an effort to sustain the burden of proof thus resting upon it, the Pacific Company offered as witnesses a number of its own and American employees, who testified at length upon the value of the services received. In addition, photostatic copies of certain records of the American Company were produced as exhibits in alleged proof of the cost of the services. Hundreds of vouchers, bills, and journal entries representing a full year's business of the American Company were included in these exhibits, but they covered the company's opera-

tions as a whole and bore only accidental reference to the state of Washington. An examination of a representative number of these documents disclosed the fact that no effort is made by the American Company to keep its costs of rendering license contract services by companies or by states. Further, it was impossible in most instances to ascertain from the documents the nature of the duties performed by employees or their applicability to the state of Washington. Traveling expense vouchers indicated that trips were made to practically all parts of the United States and in some instances to foreign countries by numerous employees, but information as to the type of service performed by them upon reaching their destination, or its value to Washington, was not shown.

Testimony was introduced by the Pacific Company, largely through American Company employees, as to the nature and value of services rendered by the various departments of the American Company, the costs of which are kept separately for each department. In many instances it is only by tracing a named employee back to his department and by reference to its name that any idea at all may be had of his duties. Since the payrolls of the company were not submitted, no data as to salaries were available. However, had such information been furnished, it would have been of little value since no attempt is made to relate the salary of an employee to the various jobs upon which he may have worked during a year. Without doubt certain of the services performed by the American Company refer to fixed capital but there are no allocations or separations made and the entire payments by the Pacific Company are absorbed in operating expenses.

We do not question the propriety of allocating the cost of certain licensee services of a general nature, definitely not of a holding company character where value of service is not in question, and where direct assignment to companies or states cannot be accomplished. However, it is our view that costs directly incurred for specific companies and states should be kept by those subdivisions, and charged to them alone. Thus we feel that American Company expense in connection with a rate proceeding in Oklahoma (for example) should be charged to Oklahoma, and no portion should be allocated to other states as is now the practice of the company. Certainly, no portion of any such costs should be allocated to the state of Washington. Primarily such expenses are incurred by the holding company to protect the integrity of its investment and should appropriately be absorbed by the stockholders rather than by subscribers in territory far removed from the state in which the controversy arises.

Exhibit C–109, introduced by the company, shows an allocation to the state of Washington for the year 1938 of $317,457, which purports to be the American Company's cost of rendering services under the license contract to the Pacific Company referable to its operation in this state. This allocation of alleged "costs" was based on certain purely judgment factors, depending on the nature of the services involved, whether engineering, legal, personnel, and the like, or

in relation to some other department of the American Company. Although some portion of the resulting amount of the alleged "costs" thus attributed by the American Company to the Washington operations of the Pacific Company might possibly have been related to certain work actually done directly for the benefit of those operations, nothing appears in the exhibit just mentioned, nor for that matter anywhere else in the record, showing specifically the amount of such direct costs, or convincingly justifying the ascription to the Washington operations of the Pacific Company of an amount computed according to the exhibit, or of any other defined amount. A large portion of these expenses are primarily for the benefit of the holding company's investors rather than the ratepayers.

For the services which allegedly cost $317,457 in 1938, the American Company was paid at 1½ per cent of certain gross revenues, or $206,493, a difference of $110,964. In accordance with the stated terms of the contract the American Company could have collected 2½ per cent of gross revenues, or $344,000,[16] but neither this sum nor the alleged "cost" was actually collected, the difference between the alleged costs and the amount collected being borne by the stockholders of the American Company. This in itself is striking evidence of a recognition that this is fundamentally a stockholders' expense, incurred primarily to protect the integrity of their investment, and which should be borne entirely by them.[17]

This Department has had this problem before it in several previous proceedings. In no instance, however, has the Department approved the inclusion in operating expenses of items representing payments for the license contract services which have been urged upon us by this company. The fact that the payments in question have actually been made to the American Company is, of course, not persuasive,[18] and we are of the opinion that the record herein will not support the operating expense allowance now asked. The situation is similar in important respects to that which was before us in the case of Department of Public Service v. Grays Harbor R. & Light Co. (1936) 12 PUR (NS) 178, 204, in which we said:

[16] Under Smith v. Illinois Bell Teleph. Co. *supra*, this would be limited to actual cost.

[17] That the services performed under the license contract are rendered primarily in the interest of the American Company stockholders is further emphasized by the fact that the conversion of four manually operated offices in Seattle was deferred at great expense to the Pacific Company in order to assist Western in smoothing out its installation and manufacturing loads. This was done in spite of the fact that the witness Crosland testified: "It installs central office equipment for the telephone companies *as and when* they require it. . . ." (italics provided) and "It (Western) could not afford to place the telephone companies in the position of not being able to get the equipment they want. . . ."

Profits earned by Western accrue to the American Company as do those earned by the Pacific Company. Western's profits will be larger if there are no marked peaks and valleys in its manufacturing requirements and since the Pacific Company is attempting to include its actual operating expenses in its claims for rates, the American Company stockholders alone benefit through such arrangements.

[18] During the past several years the actual payments (allocated to state of Washington service on the company's basis) have been as follows:

1928	$262,487.19	1934	$168,782.93
1929	211,791.00	1935	177,012.07
1930	216,268.13	1936	187,984.50
1931	210,616.02	1937	202,979.51
1932	182,295.09	1938	206,492.53
1933	159,857.38	1939	213,527.80

"The evidence touching upon the management contract and construction supervision contract was identical in this cause and in Department of Public Works v. Willapa Electric Co. in which we entered opinion, findings, and order on September 28, 1934. As we stated in that cause, the utility sought to meet the statutory burden of proof by some vague and inconclusive testimony about the value of the services rendered plus a mere offer of several volumes filled with abstracts of bare ledger entries. It required eleven days of patient and laborious examination by counsel for the Department to discover the significance of the abstracted entries. The record shows affirmatively that the figures listed in the exhibits as representing the cost of rendering the management service alone included unascertained amounts properly allocable to *cost of holding company operations and cost of rendering construction supervision.* (Italics supplied.)

"Without further extending this opinion, suffice it to say that we find that the utility utterly failed to prove the reasonableness of the arrangement by which it pays the holding company 3 per cent of its gross revenues for management services . . . ; that there was a total 'absence of satisfactory proof that it (the payment) is reasonable in amount'; that no 'satisfactory proof . . . of the cost . . . of rendering the service' was submitted by the utility. Indeed, the only real 'proof' submitted affirmatively and positively showed that the figures submitted did not represent the correct 'cost to the affiliated interest of rendering the service.' "

Essentially, this license contract problem is one which cannot finally or satisfactorily be solved by the individual states. Since it involves relationships and expenses applicable throughout the entire Bell System, it seems to be a problem for the Federal regulatory body, which alone possesses jurisdiction over both the fee-paying and fee-receiving parties to the contract.

When it is finally determined what portion of the costs of performing the services under the license contract is properly chargeable to the subscribers rather than to the American Company stockholders, it would immediately be necessary for the American Company to maintain records adequate to enable every state of the Union to secure the necessary data for their own determinations in individual cases. Under such circumstances all actual and direct costs attributable to services to individual companies and states should be segregated on the American Company's books. Reasonable allocation should then be possible in respect to nonsegregable costs of services which are unquestionably of a license contract character, and all other costs may then be attributed, as they should be, to the cost to the American Company of holding the securities of its subsidiaries and of protecting the large investment interest of its own stockholders.

In view of the fact that the American Company apparently has assumed that a portion of these costs should be borne by its stockholders, and in view of the further fact that neither it nor the Pacific Company have supplied us with any reasonable basis for the division of such costs between subscribers and stockholders, or with a con-

vincing showing as to the amount of costs actually and directly incurred with respect to the Washington operations, it seems clear that there has been a complete failure of the type of proof required by the statute in respect to the cost of services under the license contract which are properly referable to the state of Washington. Under these circumstances, the entire item of expense claimed herein must be disallowed.

The following tabulation shows the amounts of "licensee contract" payments which, in our opinion, should be deducted from the company's intrastate telephone operating expenses for 1939 and the estimates for 1940.

1. 1939 Present Rates	$195,631.85
2. 1940 Present Rates	206,142.56
3. 1940 Proposed Rates	227,116.04

Nonrecurring Expenses

[11] There are included in the company's stated operating expenses for the year 1939, certain charges incurred in connection with the proposed rate revision program in the Seattle exchange, amounting to $173,654. Exhibit C–446 shows that of this sum $112,976 represents salaries and expenses of regular employees temporarily assigned to this work. It appears that this expense would have been incurred and included in the operating expenses regardless of whether these employees were occupied on temporary duties in connection with the company's rate revision program. The balance of $60,678 represents amounts expended by the company which will not recur, of which $53,056.67 is applicable to intrastate telephone operations.

These expenditures were made in connection with the company's proposed measured service rate and extended service rate area plans. Their inclusion in operating expenses would lead to results not indicative of normal operation.

It therefore is necessary to reduce the company's intrastate telephone operating expenses for the year 1939 by $53,056.67.

Dial Conversion Program

[12, 13] As of December 31, 1938, the Pacific Telephone and Telegraph Company was supplying exchange service to its subscribers and patrons in the state of Washington by means of 52 manual magneto central offices, 50 manual common battery central offices, and 22 dial, or automatic, central offices. On March 30, 1940, two of the larger manual common battery central offices (Walnut and Lakeview, in Spokane) were replaced by step-by-step automatic equipment, and the record in these proceedings shows that within the next three years the company expects to replace no less than eight additional large manual common battery central offices with automatic equipment,[19] and that a program is now under way to convert the majority of the existing magneto central offices and certain of the smaller com-

[19] New step-by-step dial equipment to replace the existing manual office known as Proctor, in Tacoma, will be cut into service on approximately June 1, 1940, and the company plans to replace the Kenwood-Vermont and Sunset-Hemlock manual offices in Seattle with dial equipment on April 1, 1942, and April 1, 1943, respectively. The Garland manual office in Tacoma is scheduled for replacement with dial equipment on June 1, 1941, and the Glenwood and Broadway offices in Spokane are scheduled to be replaced with dial equipment on April 1, 1941, and April 1, 1942, respectively.

mon battery central offices to dial operation.

According to the testimony of Mr. I. F. Dix, vice president and general manager of the company for the Washington-Idaho area, it is not practicable for the company to convert all of these offices to dial operation earlier than is now programmed, and the conversion of the four large manual offices in Seattle originally scheduled for 1941 and 1942 has been postponed to 1942 and 1943. This action, said Mr. Dix, was taken because of the difficulty of properly taking care of the existing operating force, and further by reason of a desire on the part of the company to assist the Western Electric Company "in smoothing out their curve of installation and manufacture."

Mr. Dix testified that the company contemplated an orderly program for converting the central offices in Seattle, Spokane, and Tacoma to dial operation, starting with Seattle, as early as 1918 or 1919. This plan was halted during the depression of the early thirties because of business uncertainties and operating force problems. In 1937, the program was reëstablished, but due to shifts in population additional engineering studies were required, tending to delay the completion of the plan. This delay, together with the difficulty of absorbing the present force which would not be required under dial operation, and the asserted desire of the company to adjust its schedule to the alleged curtailed production program of the Western Electric Company, has apparently postponed the completion of this program until 1943. There is much to be said for the company's attitude towards its employees, which seems to us enlightened and of public moment in this connection. Moreover, we agree that due to uncertainties faced during the depression, it was probably advisable temporarily to postpone the dial conversion program. However, giving full consideration to these factors, we believe that the company may justly be criticized for continuing the uneconomical method of operation of partial dial and partial manual in any exchange for a period of as long as twenty years.

While the total monetary savings to be realized from converting the smaller manual exchanges to dial operation are minor, as compared with the substantial savings to be realized by converting the manual offices in Seattle, Spokane, and Tacoma to dial operation, they loom large when considered in conjunction with the present operating costs of these smaller exchanges. However, the company apparently has no definite plan for converting these exchanges and has already postponed the installation of 17 of the 22 which were proposed for conversion in its 1940 provisional estimate, prepared during the latter part of 1939. According to the company's contention, these conversions have been deferred largely because satisfactory arrangements have not yet been completed with farmer line companies. Other companies have been able to overcome such difficulties and we are convinced that this company has been negligent.

There can be no doubt but that large and substantial savings in operating expenses will be effected as a result of the conversion of the offices in question from manual to dial opera-

tion. Indeed, a consideration of Exhibit C–409 discloses that the company expects that such savings will total more than three-quarters of a million dollars, on an annual basis. Of this, approximately $700,000 will be realized in the three exchanges of Seattle, Tacoma, and Spokane. Under the company's present plan, the major proportion of these savings will be realized during the period of 1940 to 1943,[20] inclusive, and it is well able to effect additional economies by converting smaller manual exchanges to dial during the same period. It is the duty of this Department to make rates at this time that will be fair and reasonable for some time in the future. We therefore believe that it is not only necessary, but that it is our duty, to give full consideration to the savings that can and will accrue during the next few years by converting the presently manually operated central offices to dial operation. Had similar consideration to this program been given concrete form by the company, rate reductions, instead of applications for rate increases, might well have eventuated.

Separation

The Pacific Company furnishes a variety of services in the state of Washington, including exchange telephone service; message toll telephone service; private line telephone, telegraph, and teletypewriter services; teletypewriter exchange service; ship telephone service; radio program transmission service, and telephoto transmission service. Only the first two categories are at issue in these proceedings. Exchange service is exclusively intrastate,[21] whereas all the other services furnished are both interstate and intrastate. Much of the company's plant is used interchangeably and frequently simultaneously in the furnishing of these several services.

The company has maintained its accounts in accordance with the Uniform System of Accounts prescribed by Federal regulatory bodies, but because no complete segregation of property used in these several services is either provided for or is possible under existing accounting practices, the company's book records can be used only as a starting point in the determination of the reasonableness of its charges for intrastate telephone services. Since 1933 the Uniform System of Accounts for telephone companies has contained no provision for any separation of jointly used plant investments between exchange and toll. However, from 1913 to 1933 the Uniform System of Accounts did provide for a division of certain plant investments between exchange and toll, in accordance with their "principal use," which this company apparently interpreted to mean "predominant use,"[22] and it is asserted that its records reflect a division of its invest-

[20] If the company's presently anticipated conversion dates and estimated savings are accepted, the reductions in its operating expenses in each of the years 1940 to 1944, inclusive, wholly disregarding the increased savings which will result because of anticipated growth in business during this period, are as follows: Year 1940, $64,444; year 1941, $178,678; year 1942, $456,277; year 1943, $654,937, and year 1944, $695,212.

[21] The company does furnish interstate exchange service from Lewiston, Idaho, to Clarkston, Washington, but the rates at Clarkston are not at issue in this case.

[22] See testimony of Mr. W. L. Kietzman, assistant vice president of the company, in Federal Communications Commission Docket No. 5681, Tr. 355.

ment on that basis. Under such an accounting procedure, a pole carrying ten toll and eight exchange wires would be charged to toll fixed capital, whereas, if such toll and exchange wire loads were reversed, the pole would be charged to exchange fixed capital. The toll wires, in turn, might be used for both interstate and intrastate message telephone services, telegraph service, and other services rendered by the company, and exchange circuits are, of course, used in transmission of local exchange calls as well as interstate and intrastate toll messages.

The company has attempted to segregate certain of its toll expenses but, in most instances, such allocations are only approximate. Expenses associated directly with plant, such as maintenance and depreciation, follow the "principal use" classification of the property. The toll expenses, in all instances, include those involved in furnishing both interstate and intrastate message toll services, as well as all other toll and telegraph services. The accounting records of the company set forth the revenues derived from various kinds of services, such as exchange service revenues, toll service revenues, and private line revenues, but in certain instances, exchange and toll revenues are combined. No attempt is made to account separately for revenues derived from interstate and intrastate services.

For administrative purposes, the company allocates 20 per cent of toll revenues to each exchange at which they are originated, in an apparent attempt to compensate exchanges for use of exchange plant and equipment and services performed in the handling of toll business. Regardless of whether this amount may be deemed a proper or sufficient allocation for such purposes, it, of course, does not afford any acceptable basis either to the company or to this Department for an adequate determination of the reasonableness of the company's intrastate toll and exchange rates. The company, therefore, submitted extensive "separation studies," purporting to set forth the investment in plant and equipment properly allocable to exchange telephone and to intrastate toll telephone services, respectively, as well as the expenses involved in rendering these services and the revenues derived from each.

In making these studies, a survey of the plant and equipment was made to determine the investment in parts used exclusively for exchange services, exclusively for intrastate toll services, and jointly for either of these two services and other services. Certain of the jointly used items were then allocated to exchange and to intrastate toll on the basis of the relative amount of use of plant for these two classes of services, as compared with the total use.[23] Expenses, such as depreciation and maintenance, were allocated to exchange and intrastate toll, in accordance with the allocation of investment to the two services. Traffic expenses were apportioned on the basis of traffic or operator work units involved in handling the calls, and commercial and accounting expenses were allocated on the basis of special cost studies. Percentages based upon plant investments, expen-

[23] Message-minute-miles were used for toll lines, and message-minutes were used for other classes of plant and equipment.

ses, and revenues, were used to apportion other expenses.

[14, 15] The company prepared two types of separations, characterized respectively as "board-to-board" and "station-to-station," both purporting to set forth the investment, revenues, and expenses properly allocable to exchange and to intrastate toll telephone services. It was asserted that the board-to-board separation conforms with the company's method of rate making, which was stated to be based upon the assumption that toll service rates are to compensate the company for the use of facilities and services performed in transmitting calls between toll switchboards in different cities, and that the compensation which the company receives for use of plant equipment and the services performed in connecting the subscribers to the toll switchboards is included as a part of the exchange rates. [24] Opposed to this board-to-board method of rate making is the station-to-station theory, which assumes that a toll call originates at a subscriber's station and terminates at another such station, and that the toll rate is sufficient to compensate the company for the use of all facilities and for all services performed in transmitting toll messages from one telephone station to another. It was stated by the company that its purported station-to-station separation was submitted in order to comply with the decision of the United States Supreme Court in the Chicago Case,[25] in which the principle was laid down that usage of plant and equipment for toll services should be considered from one station to another instead of from toll board to toll board.

In compiling its purported station-to-station separation subscribers' line plant and equipment was apportioned between exchange and toll on the basis of the relative amount of time that such facilities were used for the two services. Under the board-to-board separation, in which such plant was not considered to be jointly used, the book cost of plant and equipment assigned to exchange service amounted to $49,204,160, whereas, in the purported station-to-station separation, it is shown to amount to $47,530,267. Expenses involved in connecting subscribers to the toll switchboards, and those associated with the subscribers' line plant apportioned to toll, were likewise allocated to toll under the so-called station-to-station separation. After making these allocations of investments and expenses to toll (they had been classified as exchange in the board-to-board separation), the company proceeded to allocate a portion of the exchange revenues to toll. The result of these involved computations to obtain a station-to-station separation was to reduce exchange net revenues, as compared with those indicated by the board-to-board separation, in the amount of $54,607, and to increase the intrastate toll net revenues $43,837.[26] This revenue allocation was apparently made on the theory

[24] The company maintains the propriety of the board-to-board theory, and quoted in evidence the definition of exchange service, which appeared in its filed tariffs in support of its contention that the exchange rate includes a charge for connection from the subscribers' stations to the toll board. The company has recently withdrawn the provision in question at the request of the Department.

[25] Smith v. Illinois Bell Teleph. Co. (1930) 282 US 133, 75 L ed 255, PUR1931A, 1, 51 S Ct 65.

[26] The difference between these exchange and toll net revenues represents the amount

that the present rates have been established on a board-to-board basis and that they therefore included an amount to cover the costs of connecting the subscribers to the toll board.[27]

It is the opinion of this Department that the Pacific Company was justified in making an allocation of exchange revenues to toll in the station-to-station separation if the telephone rates were in fact made on the board-to-board basis, and if the rates therefore in fact included an allowance to cover the costs of connecting the subscribers to the toll boards. However, it is evident that if telephone rates have been and are to be made on that basis in the future, the information afforded by station-to-station separations, such as was presented in this case, is of no value because the final results are to all intents and purposes not different from those produced by the board-to-board separations.[28]

The license contract which, among other things, specifies the method of dividing revenues derived from interstate toll business interchanged with the Long Lines Department of the American Company states with respect to the portion retained by the Pacific Company that ". . . said compensation (is) to cover the use of the necessary switchboard and trunking and other toll terminal plant and facilities and all the facilities and services of an exchange furnished for and in connection with such communications whether to or from such exchange, except the exchange service required to establish connection between an exchange station and the toll terminal plant, for the use of which excepted facilities the licensee is compensated by its rates for exchange service in such exchange." Obviously, if this Department were to be guided by this provision, it would be necessary to fix exchange rates in such fashion as to include a portion of the charge for interstate toll service which is not within its jurisdiction.

It is our opinion that to adopt the board-to-board basis for making telephone rates would not only encroach upon the field of Federal regulation, but would also violate sound principles of rate making. In the first place, the majority of the toll calls are originated by a small percentage of the subscribers; in fact, many subscribers do not use toll service at all, yet if the board-to-board basis were to be adopted, some amount must be added to each subscriber's exchange bill to cover the cost of connecting subscribers to the toll boards. The board-to-board basis of rate making, therefore, discriminates against the small and occasional users of toll service in favor of large users. It also discriminates in favor of pay-station users because

which the company assumed was included in subscribers exchange rates to cover the cost of connecting the subscribers to the toll switchboards for the purpose of completing interstate telephone calls.

[27] Exhibit C–448 shows that the exchange net revenues under the company's station-to-station separation methods should be increased $306,688 for 1938 under the present rates, $378,910 for 1938 under the proposed rates, $309,729 for 1939 under the present rates, $331,826 for 1940 under the present rates and $412,598 for 1940 under the proposed rates if it were assumed that the rates are or were to be made on the station-to-station basis rather than on the board-to-board basis.

[28] If the exchange, intrastate toll and interstate toll net revenues under the board-to-board separation produces a uniform rate of return on the investments allocated to these services, the rates of return would remain uniform after the further station-to-station separation if properly made. However, in the present instance, the methods used by the company were in error. This resulted in understating the exchange net revenues.

the same charge is made for a toll call whether it is originated at a public pay station or at a subscriber telephone.[29] For these reasons we cannot accept the board-to-board basis of rate making.

We recognize that toll service rates must be set at a higher level under the station-to-station theory of rate making than under the board-to-board basis. Thus, it would be patently unfair to use the station-to-station theory for setting exchange rates and the board-to-board basis in fixing toll rates because under such a procedure the company would be unable to recover certain exchange expenses allocated to toll and would concurrently fail to obtain a return on the portion of the investment in subscribers lines allocated to toll services. Regardless of what may have been the rate-making theory employed by this company in the past, we are now adopting the station-to-station basis of rate making and shall require that the company's tariffs be constructed hereafter upon that principle.

In order No. F. H. 7084, effective as of January 1, 1938, the Department ordered that "all telephone utilities engaged in interstate business shall prepare at reasonable intervals separation studies from which it may segregate as between interstate and intrastate operations the accounts for plant, operating expenses, operating revenues, taxes, depreciation, etc., and so report them annually to the Department . . . ."

Because of the work and expense now involved in compiling exchange and intrastate toll operating results under the company's present practices, and because it is impossible for this Department to regulate telephone rates efficiently and economically without having these data available currently, we consider it imperative that this company proceed at once to devise ways and means acceptable to this Department, whereby reasonably accurate separation data may be made available to the Department as a current operating routine. In developing reports to show separately the exchange and intrastate toll operating results, toll service should be considered as originating at a telephone station and terminating at another and the expenses should include all costs directly incurred in its rendition, plus a fair proportion of operating costs incurred jointly by toll and other services.

In view of these conclusions, the corrections which are listed below should be made in the intrastate telephone net revenues compiled under the company's station-to-station methods:

1. 1939 Under Present Rates	$42,739
2. 1940 Under Present Rates	45,402
3. 1940 Under Proposed Rates	62,496

Rate Case Expenses

[16, 17] There is included in the operating expenses of the company for the year 1939, the sum of $404,457.12, classified as rate case expense.

[29] Under the board-to-board theory the subscribers' exchange rate includes an amount to cover the cost of making connections to the toll board, whereas the costs of connecting pay station users to the toll board would either have to be borne by the company's regular exchange subscribers or by users of pay stations for local calls. The latter could be assumed only on the theory that some portion of the nickels paid for local calls were to cover the cost of connecting other users to the toll board for the purpose of making toll calls.

It is asserted by the company that of this amount $226,502.61 is represented by salaries and expenses of regular employees of the company diverted temporarily from their ordinary duties to work on the instant causes. It appears that these amounts would have been incurred and included in operating expenses whether or not the present rate proceedings were in progress. The remainder, $177,954.51, comprises nonrecurring rate case expenses. To this amount should be added $82,428.15 representing bills of this Department for the cost of its investigation assessed to the company in accordance with statutory authority, making a total for 1939 of $260,382.66. Similar estimated nonrecurring rate case expenses for the year 1940 are $20,000 and $90,000 for the company and Department, respectively, making a total for the year of $110,000. The total of such nonrecurring rate case expense for the period 1939 and 1940 is therefore $370,382.66.

Unadjusted use of the stated expenses of the company for rate case work during the investigatory period would obviously introduce a wide distortion from normal experience were the entire amounts of these particular expenses to be included. Since these figures represent proper operating charges, they must be allowed, but it is our opinion that the sum of $370,382.66 should be amortized over a period of ten years,[30] in equal amounts of one-tenth of the total amount or $37,038.27 annually. This will serve to increase stated operating expenses in the estimates for the year 1940, as prepared by the company, since only normal regulatory costs were included in those forecasts. As stated above, $260,382.66 has already been charged to operating expenses for the year 1939. Since the annual amortization charge is $37,038.27, an adjustment downward for 1939 of $223,344.39 should therefore be made, and for 1940 and subsequent years adjustments upward of $37,038.27 will also be made.

1939 Present Rates	$204,566.88
1940 Under Present Rates	37,038.27*
1940 Under Proposed Rates in Full Effect	37,038.27*

* Denotes a red figure.

Adjusted Operating Statements

The effect upon the company's operating expenses of the adjustments hereinabove discussed are summarized in the following tabulation: These adjustments in each instance result in increasing the net operating income for the state of Washington which, in turn, acts to increase the amount of Federal income tax applicable to this state. This is true because of the fact that income tax is paid on total company net income, which is then apportioned to individual states on the basis of their operating income prior to income taxes. This adjustment which acts as a reduction to those

[30] West Ohio Gas Co. v. Ohio Pub. Utilities Commission (1935) 294 US 63, 79 L ed 761, 6 PUR(NS) 449, 55 S Ct 316, and cases cited therein. At page 4326 herein, Mr. Kietzman, the company's principal rate witness, stated that the exchange grouping proposed in the present case "would probably be good for a long period of time . . . ten years." In Driscoll v. Edison Light & P. Co. (1939) 307 US 104, 121, 83 L ed 1134, 28 PUR(NS) 65, 76, 59 S Ct 715, the court said: "There could rarely be an anticipation of annually recurring charges for rate regulation. Under the circumstances here presented where full statistics on investment, inventory, and labor requirements have been made which, as cumulated, will form largely the basis of all future negotiations, we are of the opinion that amortization over a 10-year period is reasonable."

aforementioned, will be found on the statement following. It is a summary tabulation of indicated adjustments and is presented for convenient reference:

In the following tabulation the unadjusted operating income figures and the unadjusted assumed rate base figures as shown on page 9 have been brought forward for the purpose of

SUMMARY OF ADJUSTMENTS TO OPERATING INCOME—INTRASTATE TELEPHONE OPERATIONS

	1939 Present Rates	1940 Present Rates	1940 Proposed Rates
1. Federal Income Tax on Dividend Income	$12,715.33	$19,040.20	$32,532.15
2. Elimination of Licensee Fees	195,631.85	206,142.56	227,116.04
3. Interest on Unfunded Pension Liability	114,622.89	114,520.17	114,527.76
4. Nonrecurring Expense in connection with Rate Revision Program	53,056.67	.....	.....
5. Rate Case Expenses	204,566.88	37,038.27*	37,038.27*
6. Station-to-Station Separation Correction	42,739.00	45,402.00	62,496.00
7. Depreciation on Plant Adjustments	9,448.76	2,122.67	2,126.55
8. Income Tax on Adjustments	94,436.06*	53,944.19*	60,664.17*
9. Total Adjustments as per Ex. C–446, p. 60	$538,345.32	$296,245.14	$341,096.06
10. Adjustments a/c Revised Depreciation Rates as per Ex. C–454, p. 15	$253,085.04	$253,593.95	$257,140.49
11. Income Tax Applied to Adjustments on Line 10†	38,544.85*	41,310.45*	42,248.18*
12. Total Adjustments	$752,885.51	$508,528.64	$555,988.37

* Indicates red figure.
† Rate of Income Tax.

1939 Present Rates, 15.23% 1940 Present Rates, 16.29% 1940 Proposed Rates, 16.43%

In addition to the foregoing adjustments to operating income, others are necessary with respect to the assumed rate base figures as presented on the tabulation of unadjusted data.[31] These, as indicated in Exhibit C–446, have been discussed in connection with related items included in operating expenses, and are set forth covering intrastate telephone operations as follows:

applying the indicated adjustments in order to show the results of the company's intrastate telephone operations on an adjusted basis:

[Tabulation on page 223.]

Claims Made by the Company in Respect to Rate Base

The company offered testimony relating to "reproduction cost," "the cost of establishing the business," the

	1939 Present Rates	1940 Present Rates	1940 Proposed Rates
Interest on the Unfunded Actuarial Pension Reserve Requirement Charged to Plant and Equipment	$41,565.78	$55,134.23	$55,235.03
Construction Work Associated with the Rate Revision Program[32]	207,085.86	.....	.....
Total Adjustment to Assumed Rate Base	248,651.64	55,134.23	55,235.03

[31] Exhibit C–455, p. 114, indicates that an excessive charge of $1,478,381 was made by the American Company to the Pacific Company on the sale of leased instruments in 1927. A portion of this charge applicable to Washington remains on the books today. However, information with respect to the transaction necessary to enable the adjustment of fixed capital for the purpose of these proceedings was not available.

[32] This item has not been included in assumed rate base figures for 1940 estimated under present rates. It is properly chargeable to 1940 estimated under proposed rates, and therefore it is not necessary to deduct it from the figures for either of the 1940 estimates.

"per cent condition" of its property used in deriving the amount claimed as the existing depreciation in its properties, the "going concern value," and the "fair value" of its properties in the state of Washington. The company's asserted fair value of its plant and equipment of $68,000,000 is $274,348 more than the sum of its estimated "reproduction cost" and its "going concern value" less the amount claimed for existing depreciation. We discuss this claim of "fair value" later herein.

The Company's Reproduction Cost Estimate

[18] The company submitted an estimate of the cost of reproducing its plant and equipment in the state of Washington in the amount of $67,059,639.[33] In making this estimate, the company priced inventories which were largely compiled from engineering and property records. Building material quantities were summarized from contractor's original estimates which did not reflect actual conditions. The Department engineers' check, which involved five of the larger buildings, disclosed numerous errors that resulted in understating the company's estimated reproduction cost of one of the buildings in the amount of 1 per cent, and overstating the others from 1 per cent to 11 per cent.

The costs of materials included in the company's appraisal, which account for nearly 50 per cent of the total, in most instances were based upon Western Electric Company's prices of the following nature: (a) Western's published catalogue prices effective as of December 31, 1938, (b) Western's published catalogue prices effective as of dates prior to December 31, 1938, (c) prices furnished by Western for items not manufactured in sufficient quantities to justify their publication as of December 31, 1938, (d) prices estimated by the Pacific Company engineers for items no longer manufactured by Western (e) Western's published prices as of December 31, 1938, for substitute items, and (f) prices furnished by Western for obsolete items purporting to represent the amount which it would charge for such items were they manufactured as of December 31, 1938.

Since Western is a wholly owned subsidiary of the American Company [34] and supplies nearly all of the materials used by the Pacific Company, it is essential to determine whether or not the prices used by the company engineers in compiling the appraisal of its properties are in fact reasonable and also whether the pric-

	1939 Present Rates	1940 Present Rates	1940 Proposed Rates
Unadjusted Operating Income	$982,845.00	$1,579,860.72	$2,910,292.12
Adjustments to Operating Income	752,885.51	508,528.64	555,988.37
Adjusted Operating Income	1,735,730.51	2,088,389.36	3,466,280.49
Unadjusted Assumed Rate Base	39,174,442.20	39,607,654.24	40,449,766.27
Adjustments to Assumed Rate Base	248,651.64*	55,134.23*	55,235.03*
Adjusted Assumed Rate Base	38,925,790.56	39,552,520.01	40,394,531.24
Adjusted Rate of Return	4.46%	5.28%	8.58%

[33] Includes Telephone Plant in Service, Account 100.1, and Property Held for Future Telephone Use, Account 100.3 only, adjusted to reflect Plant Not in Use as of December 31, 1938, and retired in 1939.

[34] Under the statute, both Western and the American Company are affiliated interests. Rem. Rev. Stat. 10440–1.

es actually paid for such materials have been reasonable. The company offered testimony of two Western employees and one American Company employee in an attempt to prove the reasonableness of these prices. It was their contention that Western's prices were reasonable if they were not higher than the prices charged by independent suppliers for comparable items and if Western's profits were reasonable. The price comparison studies offered in support of this thesis are not convincing because: (a) Western has a large and assured volume of sales, whereas the independent suppliers with which comparisons are made must fix prices to earn a profit on a relatively small volume of business; (b) the difference between Western's and the independents' pricing policies were not given proper consideration; (c) Western's and the independent suppliers' prices are not comparable because the independents have credit risks and incur sales expense, whereas Western does not; (d) no proof has been produced that the independent suppliers' prices with which comparisons are made are reasonable; (e) the cost of Bell System fundamental development and research work performed by Bell Laboratories is billed to the American Company, whereas such costs incurred by the independents must be absorbed and included in their selling prices; (f) Western has advance knowledge of Bell Companies' requirements, whereas the independents have little, if any, knowledge of their customers' requirements and must sell as, if, and when the telephone companies require materials and then under competitive conditions; (g) the studies do not set forth any comparisons of Western's and independent suppliers' prices for assembled apparatus such as are set forth in Exhibit C–341, but are limited to hypothetical comparisons; and (h) the studies do not set forth comparisons of Western's prices with those actually charged by independent suppliers even in instances where such information was used in compiling the studies, as is the case of lead covered cable.

The company's testimony relating to the reasonableness of Western's profits, as they apply to the materials sold to the Pacific Company for use in the state of Washington—or as they apply to the prices used by the company in determining the reproduction cost of its properties, also was not convincing for the following reasons: (a) Western's shop expense overheads and development loadings are not so allocated as to render possible the determination of the cost of individual products or lines of products; (b) Western's method of compiling variations from standard costs of materials and labor will not give correctly the cost allocable to individual products or lines of products; (c) Western's stated cost of products sold in any given year, from which its profit is computed, is not the actual cost of the products sold in that year, but is more nearly the cost of the year's operations. These costs are charged against the products sold during such year. It follows that Western's asserted profits, as shown on Exhibit C–174, do not correctly represent the profit on sales in any specific year or any group of years. Hence, no proof may be derived from that exhibit in respect to Western's profits on the

materials and equipment which are included in the Pacific Company's plant in the state of Washington, or in respect to Western's profit margins on materials and equipment at prices used in the company's "reproduction cost" estimates in these proceedings; (d) Western's average earnings during the 22-year period, 1916 to 1938, were apparently excessive, particularly in view of the fact that it is the manufacturing branch of the Bell System and, under such circumstances, should be allowed to recover its costs if they are reasonable, plus a reasonable return; (e) no showing has been made as to what earnings Western should be reasonably allowed; (f) there are no data in this record to show the profit that would accrue to Western if it sold all the materials in this company's plant at prices which the company used in determining its estimated reproduction cost.

Mr. F. J. Hammel, general price manager of Western, stated that in setting prices for obsolete items he gave no consideration to his company's established policy that such prices should not be higher than those charged for other types and designs that will function equally well or better. The reason given by Mr. Hammel for this departure from established pricing methods was that the earlier models were assumed to be in production and the later models were assumed never to have been developed. How such an assumption can be made reasonably when both the old and new models are currently in service in the plant was not explained. The anomalous results obtained from this method of pricing are illustrated by loading coils and cases. Here, obsolete types were priced at $564, and the types currently manufactured of superior quality were priced at $336 each. If both types are assumed to be in production for the purpose of the reproduction cost estimate, it would not, of course, be possible for Western to sell the inferior obsolete type for as much as $336.

In estimating the cost of Western's services involved in installing and engineering central office equipment, the company engineers developed the percentage relationship found to exist between the cost of such engineering services and Western's material prices, and the relationship found to exist between Western's installation costs and the previously determined material and engineering costs for certain central offices considered to be representative of all offices owned by the company in the state of Washington. These percentages, which were based upon estimates supplied by Western's engineers, were then used to determine the total cost of such services. This is not the method used by Western in establishing the amount of its charges for such services under firm contracts for the sale of central office equipment, and it is evident from the record that there is no direct relationship between the prices Western charges for central office materials and its engineering and installation services.

Mr. C. S. Watt, Western price engineer, who estimated the costs of installing these sample offices, admitted during cross-examination that reproduction cost estimates of installation of the manual and dial central offices should be made on the same basis as that used to determine actual charges made for such services.

In general, the company assumed that all outside plant and station equipment, except a portion of the underground conduit, would be reconstructed by company forces. In developing the cost of performing such work, the company relied upon actual experience. It was brought out during cross-examination that the methods used by the company engineers in developing the reproduction labor costs were erroneous, and that much of the actual experience used as the basis was not representative of the performance that would be experienced on a reproduction program. The same was found to be true with respect to many of the materials and labor loadings and overheads included in the company's appraisal.

In the light of all we have said concerning the company's reproduction cost estimate herein, it is our considered conclusion that such testimony is lacking in probative value and that we have not been afforded by the company with adequate or credible data on which to base a reliable conclusion as to the reproduction cost of the company's property in the state of Washington.

Accrued Depreciation

[19–21] We have carefully considered the testimony in this case relating to the problem of determining the amount of depreciation that exists in this company's plant and property. The company's witnesses testified that they inspected samples of plant and property and observed certain conditions which caused them, through the use of what they called "judgment," to come to the conclusion that such existing depreciation amounts to 9.6 per cent of the value of the whole. They then applied this percentage to the figure which they declared represents cost of reproduction and have arrived at a dollar figure of $6,676,158 as of December 31, 1938.

The factors which cause depreciation not only include wear and tear, the action of the elements, and similar causes of deterioration, but also such functional causes as inadequacy, obsolescence, and the requirements of public authorities. The company witnesses gave little consideration to anything but purely physical causes of depreciation. In fact, their studies indicated the amount of deferred maintenance rather than the sum of the depreciation.

Functional depreciation was clearly shown to exist in this company's plant. We, therefore, can give little weight to the claims advanced by the company witnesses for accrued depreciation.

We are forced to the conclusion that the company has fallen short of sustaining the burden of proof as to the amount of accrued depreciation presently existing in its plant, nor have any reasonably reliable figures relative to this item been furnished us. In view of these facts we are forced to rely upon the depreciation reserve we have found to be assignable to the state of Washington as the proper measure of depreciation.

The Company's Claim of "Fair Value"

The company's claim of "fair value" of its properties used and useful in rendering telephone service in this state was offered by Mr. Dix, who testified that in his opinion it is $68,000,000. He declared that in arriving at his opinion he had "given con-

sideration": (1) to the company's claimed cost of reproduction of $69,658,344; (2) to that figure less the company's admitted "existing depreciation" in the amount of $6,685,625, or a net of $62,972,719; (3) to the recorded book cost of $69,966,143; (4) to the company's asserted "cost of establishing the business" under reproduction of $3,160,500; and (5) finally to his own "judgment figure" of $5,000,000 for "going concern value." [35]

On cross-examination Mr. Dix declared that these were all the factors that he had considered, but he was unable to state the particular weight accorded by him to any individual factor. He rested his opinion as to "fair value" solely upon his general asserted "consideration" of these several factors, and stated that his estimate was "not a mathematical computation." He offered no further explanation respecting the basis of such opinion.

Mr. Dix further testified that, in arriving at his "fair value" figure, he had accepted and used without alteration Mr. Tellwright's estimate of "reproduction cost," as well as Messrs. Hewitt and Codington's "condition per cent" estimates, and he added that he had accepted the latter figure as "a fair measure of all depreciation that had occurred in these properties up to December 31, 1938."

We have previously demonstrated the infirmities existing in two of the major elements entering into the company's determination of "fair value," namely, "reproduction costs" and "existing depreciation." In view of the fact that we have rejected the company's claims with respect to these two important factors, we shall not burden this order with a discussion of the other factors stated to have been given consideration. We are, therefore, forced to reject the company's claim of "fair value."

Reasonableness of Return under Existing and Proposed Rates

[22] We have previously discussed the company's recorded book data in respect to its investment, revenues, and operating expenses in this state, and certain adjustments which we deem essential in order to judge the reasonableness of the company's existing and proposed rates. It is estimated by the company that the proposed rates would produce net revenues in 1940 in the amount of $3,466,280 or $1,377,891 more than would be produced under the existing rate schedules. Were we to grant these proposed increases, the resulting net revenues would produce a return of 8.6 per cent upon the estimated average book cost of plant and equipment during 1940 (including additional investment required under proposed rates), less the depreciation reserve, plus working capital. This return we find to be unreasonable, unjust, excessive, and unlawful.

It is apparent that the earnings to be tested against revenue requirements are those of the immediate and reasonably foreseeable future. It is evident from the company's estimates, under its existing rates as adjusted herein, that during the year 1940 it will receive from its intrastate telephone operations in the state of Washington net revenues in the amount of $2,088,389. These reve-

[35] The figures used do not reflect revisions set forth in Exhibit C-439.

nues equal a rate of return of 5.28 per cent upon the book cost of the company's property, less the depreciation reserve, plus working capital, amounting in total to $39,552,520.

It is only fair to direct attention to the fact that the day before the close of the hearing Mr. Dix testified that in the light of the company's actual experience during the first three months of the year, these net earnings were, in his opinion, overstated in the amount of $225,000.[36] We are not convinced that the estimate originally submitted by Mr. Dix overstated the net revenues, but were this revision accepted, the effect upon the intrastate net revenues would be considerably less than this amount because it includes adjustments of both interstate and intrastate revenues and expenses and does not reflect necessary tax adjustments. Even though consideration be given to this revised revenue and expense estimate it is obvious that the company's net earnings in 1940 will approximate $2,000,000. The return on this basis will amount to more than 5 per cent.

In arriving at these rates of return of 5 per cent plus and 5.28 per cent no consideration has been given to savings in operating expenses approximating $700,000 resulting from dial conversions scheduled during the next three years. In addition there is substantial evidence in the record which indicates that the annual depreciation expense used in determining the above net revenues is in excess of requirements. If these factors were applied here, it is evident that the returns above found would be very materially increased. While the $700,000 savings mentioned would not apply to 1940, it is the duty of this Department to give consideration to the reasonableness of the earnings under the existing rates, during a reasonable period in the future. In our order herein, we reserve jurisdiction to consider these matters further in F. H. No. 7229.

[23] As a matter of law, the burden of proof justifying the reasonableness of the proposed schedules has been upon the company. Taking into consideration the findings we have made relating to return under the present and proposed rates, the substantial reductions in operating expenses that will be realized during the next few years and the fact that the annual depreciation expenses used in determining the above stated net revenues appears to be excessive, we find that the company has failed to sustain the burden of showing that the Department should permit the proposed rate schedules to go into effect in order that its over-all intrastate earnings will produce a reasonable return; and we also find that the company has not proved that its intrastate telephone revenues derived under its existing rates are insufficient. We are not convinced that the over-all intrastate earnings of the company under its existing rates are unjust, unreasonable, and insufficient.

[36] According to the witness, this total reduction in net would arise from increased traffic expenses of $55,000 and increased cost of relief and pensions of $25,000 to which should be added a reduction in estimated toll service revenues of $205,000 offset in part by increased exchange revenues of $60,000. This revision of the 1940 estimate, said Mr. Dix, was a current view, made in the light of actual operations during the first three months of the current year.

Conclusion

In arriving at our conclusions in the three suspension proceedings (Cause No. F. H. 7160, No. F. H. 7163, and No. F. H. 7251), all of which have been consolidated for the purpose of hearing with the Department's general investigation of the valuation, rates, practices, and services case entitled "Department of Public Service v. Pacific Telephone and Telegraph Company, a corporation, No. F. H. 7229," we have carefully and fully considered all of the evidence presented and all the facts and circumstances reflected by the record herein and we find that each and every tariff filing made by this company considered in Cause No. F. H. 7160, No. F. H. 7163, and No. F. H. 7251 seeking to change rates or services in any manner whatsoever should be permanently suspended and the respondent should be required to cancel all said tariff filings.

The issues in the proceeding entitled "King County, a municipal corporation v. Pacific Telephone and Telegraph Company, a corporation, Cause No. F. H. 7213," which has also been consolidated with Cause No. F. H. 7229 for hearing, have been disposed of by our permanent suspension ordered herein, and we find that said cause should be dismissed.

These proceedings indicate one further fact: That the local management of this company should be given greater freedom of action in handling matters in this area. If such authority were granted, we believe that many of the problems discussed herein could have been solved without this time consuming and costly investigation. The fine spirit of coöperation and fairness shown by Mr. Dix throughout these proceedings were of great assistance to the Department. We feel that he is a man of high ability and integrity.

All matters relating to rates, charges, and services in the Department's general valuation rates, services, and facilities proceeding in Cause No. F. H. 7229, will be duly and properly considered in a separate order to be issued by the Department and the Department retains jurisdiction for this purpose.

ORDER

Having fully considered all the facts and circumstances involved in these cases, and based upon the foregoing findings of fact and opinion, the Department of Public Service of Washington makes and enters the following orders:

1. In Cause No. F. H. 7160 entitled Department of Public Service v. Pacific Telephone and Telegraph Company, a corporation, it is ordered that Sheets 42747 to 42749, inclusive, of Tariff W.D.P.S. Nos. 5 and 6, Advice No. 392, and Sheets 42750 to 42754, inclusive, of Tariff W.D.P.S. No. 6, Advice No. 393, being tariff filings of the Pacific Telephone and Telegraph Company originally filed on June 22, 1938, and finally filed as of January 12, 1940, effective February 12, 1940, providing in general for the passing on to customers within cities of municipal occupation license taxes levied by such cities; and providing further for certain increases in message toll telephone rates on intrastate routes exceeding 56

miles airline distance, shall be suspended permanently, and the Pacific Telephone and Telegraph Company is hereby *ordered* to cancel said sheets.

2. It is *further ordered,* in Cause No. F. H. 7163 entitled "Department of Public Service of Washington v. Pacific Telephone and Telegraph Company, a corporation, that Sheets 42755 to 42855, inclusive, of Tariff W.D.P.S. Nos. 5 and 6, Advice 394, originally filed on June 27, 1938, and finally filed as of January 12, 1940, effective February 12, 1940, being tariff filings of the Pacific Telephone and Telegraph Company, shall be, and they are hereby, permanently suspended, and the Pacific Telephone and Telegraph Company is hereby ordered to cancel said sheets.

3. It is *further ordered,* in Cause No. F. H. 7251 entitled, Department of Public Service of Washington v. Pacific Telephone and Telegraph Company, a corporation, that Sheets 44282 to 44685, inclusive, of Tariffs W.D.P.S. Nos. 5, 6 and 7, Advice No. 432, originally filed May 10, 1939, and finally filed as of January 12, 1940, effective February 12, 1940, being tariff filings of the Pacific Telephone and Telegraph Company, shall be, and they are hereby, permanently suspended and the Pacific Telephone and Telegraph Company is hereby *ordered* to cancel said sheets.

4. It is *further ordered* that Cause No. F. H. 7213 entitled King County, a municipal corporation v. Pacific Telephone and Telegraph Company, a corporation, shall be, and it is hereby dismissed.

5. It is *further ordered* that the Department shall retain jurisdiction of Cause No. F. H. 7229 entitled "Department of Public Service of Washington v. Pacific Telephone and Telegraph Company, a corporation, to issue such order or orders in said cause as shall be proper.

GARRISON, Supervisor of Public Utilities, concurring: I agree with the findings and order but think that the following additional finding should be made where we discuss the pension plan.

Our order questions the propriety of charging to operating expenses, accruals for pensions to retired high salaried executives of this company. However, the order provides for no present change in that regard. I cannot feel that this matter should go unchallenged. As indicated in the body of the order, the Bell plan provides for payment of extremely generous pensions to this group, in some instances exceeding $1,500 per month to a single individual. I cannot agree that the telephone subscribers should be required to contribute to the future security of retired executives who have for many years been paid annual salaries as high as $60,000.

It is noted that under the present Bell pension plan a person who has had an average earning record with the company of $10,000 per year for a period of ten years, and thirty years service, would receive $250 per month. In view of this situation, I believe that this company should not be permitted to charge to operating expenses an accrual rate that includes the payment of pensions in excess of $250 per month. Certainly any employee who has had an earning record which would provide a pension in

excess of the above amount has already been sufficiently paid for services rendered, and has at all times been in a position to provide for his own future security. In placing a limitation of $250 per month, I believe this amount to be ample security for those who have experienced long periods at high salaries and who may have become unfortunate enough to be compelled to rely upon pensions.

I further direct attention to the fact that this utility is a private enterprise, supported by revenues from a public required to pay an established rate for a necessary service. In placing this limitation I recognize that the great majority of subscribers who are contributing to this fund through the payment of rates, actually earn considerably less than $250 per month.

It is estimated that this limitation will affect only a small number of employees.

WASHINGTON DEPARTMENT OF PUBLIC SERVICE
DIVISION OF TRANSPORTATION

Re Skagit River Navigation & Trading Company et al.

[Cause No. 7121.]

Apportionment, § 64 — Equipment — Water carrier.

1. The Commission, in determining the book cost of a boat freight carrier's property, allocated the floating equipment on the basis of ton miles; docks, wharves, and real estate on the basis of tons on affected routes; office furniture and fixtures on the basis of tons of freight handled, p. 234.

Apportionment, § 53 — Working capital — Interstate and intrastate operations.

2. The Commission allocated an allowance for working capital of a boat freight carrier between interstate and intrastate operations on the basis of previously allocated fixed capital, p. 234.

Apportionment, § 42.1 — Direct expenses — Indirect expenses — Ton-mile basis.

3. Direct transportation expenses of a boat freight carrier were apportioned on a ton-mile basis, while its indirect expenses were apportioned on the basis of tons of freight handled, p. 234.

Valuation, § 102 — Accrued depreciation — Sinking-fund method.

4. The 4 per cent sinking-fund method of depreciation should be adopted in determining the rate base when book cost undepreciated is used as a figure representing fair value, p. 235.

Rates, § 140 — Reasonableness — Competition as factor.

5. Rate increases should not be ordered for a boat freight company at the instance of competitors, although the company is not earning a return to which it might be entitled, when rate increases would cause curtailment of traffic and result in a decrease in revenues, p. 235.

[May 17, 1940.]

WASHINGTON DEPARTMENT OF PUBLIC SERVICE

PROCEEDING *to investigate and fix the valuations, rates, charges, rules, regulations, and practices of certain steamboat companies; findings in accordance with opinion.*

By the DEPARTMENT: This matter came on regularly for hearing at Seattle, Washington, on the 16th, 17th, and 18th of January, 1939, and April 24, 27, 28, 1939, and also October 9, 1939, pursuant to notice duly given before Ferd J. Schaaf, Director, Ralph J. Benjamin, Supervisor of Transportation, and Don Cary Smith, Examiner.

The parties were represented as follows:

Department of Public Service of Washington by Will M. Derig, Examiner, Olympia; Puget Sound Freight Lines by Philip D. Macbride, of Macbride and Williams, Attorneys, Seattle; Peninsula Navigation Company by E. V. White, Agent, Seattle; Skagit River Navigation and Trading Company by Steven V. Carey, of Kerr, McCord and Carey, Attorneys, Seattle; Bellingham Chamber of Commerce by A. B. Culmer, Secretary, Bellingham; Carnation Company, Albers Bros. Milling Company by C. S. Connolly, Western Traffic Manager, Seattle; A. M. Castle & Company by C. C. Mueller, Traffic Manager, Seattle; Centennial Flouring Mills Company by O. W. Hardesty, Traffic Manager, Seattle; Crescent Manufacturing Company by E. A. Johnston, Traffic Manager, Seattle; Fisher Flouring Mills Company by M. D. Moon, Traffic Manager, Seattle; Frye & Company by J. D. Paul, Traffic Manager, Seattle; Imperial Candy Company by E. E. Beckett, Traffic Manager, Seattle; Lowman & Hanford Company by Robert Chalmers, Traffic Manager, Seattle; National Grocery Company by G. A. Mulvey, Traffic Manager, Seattle; Olympia Chamber of Commerce by B. F. Hume, Secretary, Olympia; Pacific Marine Supply Company by E. A. Carmody, Traffic Clerk, Seattle; Port of Bellingham by J. S. Gloman, Manager, Bellingham; Port of Everett by Nels Weborg, Secretary-Manager, Everett; Puget Sound Machinery Depot by B. F. Curtis, Traffic Manager, Seattle; Seattle Chamber of Commerce and others similarly situated by Raymond W. Clifford, Attorney, Olympia; Seattle Chamber of Commerce further appeared by L. S. McIntyre, Manager of Transportation Department, Seattle; Seattle Industrial Traffic Managers Association by Alex D. Stewart, Executive Secretary, Seattle; Schwabacher Bros. & Company, Inc., by H. J. Dobb, Traffic Manager, Seattle; Schwabacher Hardware Company by Rae C. Johnston, Traffic Manager, Seattle; Sears Roebuck & Company by D. B. Shields and H. C. Shaw, Traffic Department, Seattle; Seattle Hardware Company by W. A. Norton, Traffic Manager, Seattle; Tacoma Chamber of Commerce and Port of Tacoma by Jay W. McCune, Traffic Manager, Tacoma Chamber of Commerce, Tacoma; The Merchants Exchange by B. D. Riley, Manager and Assistant Secretary, Seattle; Washington Co-op Egg and Poultry Association and United Dairymen Association by Herbert Schroeder, Traf-

fic Manager, Washington Co-op Egg and Poultry Association, Seattle; Coast Transit, Inc., by J. P. McMullen, Manager, Seattle; Northwest Transfer by S. C. Roland, Owner, Bellingham; Northwest Motor Freight Bureau and Peninsula Tariff Bureau by H. D. Williams, Agent, Seattle; Pacific Highway Transport by H. R. Culbertson, Traffic Manager, Seattle, and T. C. Fox, Assistant to Traffic Manager, Seattle; Pacific Inland Tariff Bureau by F. K. Hedges, District Supervisor, Seattle; Seattle Auto Freight Depot by J. L. Bracklin, Manager, Seattle; South Bay Motor Freight Company, Inc., by J. M. F. Taylor, President, Aberdeen; Washington Motor Freight Association by R. H. Culbertson, Seattle; Washington Motor Freight Association and Pacific Highway Transport further appeared by Reuben C. Carlson, Attorney, Tacoma; South Bay Motor Freight Company, Inc., further appeared by L. B. Donley, Attorney, Aberdeen; S. C. Roland by Frederick J. Lordan, Attorney, Seattle; Pacific Highway Transport further appeared by Frederick J. Lordan, Attorney, Seattle.

Witnesses were sworn and testified, exhibits introduced, and from the testimony introduced at the said hearings, the Department makes the following:

Findings of Fact

The complaint in this cause was filed by the Department of Public Service on its own motion on April 29, 1938. On October 20, 1938, as a result of investigations conducted by members of its accounting staff, the Department dismissed its complaint against Waters Brothers, Borderline Transportation Company, San Juan Transpoi tation Company, West Pass Transportation Company, and Peninsula Navigation Company because the operations of these carriers are so small that they have no appreciable effect on the matters involved in the complaint.

Heretofore on March 12, 1940, findings of fact and order were issued herein as to the valuation and rate of return of the Puget Sound Freight Lines and affiliated companies. These findings of fact and order will be confined to the valuation and rate of return of the Skagit River Navigation and Trading Company. This company is one of the oldest boat freight carriers on Puget Sound. It operates specially constructed, shallow draft vessels between Seattle and Tacoma on the one hand and points on the Skagit river, Anacortes, Stanwood, and also serves many small north Puget Sound points. Its chief sources of revenue are the large hauls from canneries at Mount Vernon, Stanwood, and Anacortes to off-shore ships at Seattle and Tacoma, large hauls of cannery supplies returning, and big shipments of hay, grain, and feed from the Skagit valley to the northern portion of Puget Sound. Approximately 80 per cent of this company's business is interstate; and almost 75 per cent of its business is between Seattle and Mount Vernon.

The Department's staff made but one investigation of the books, records, and operations of this company. We have before us the figures for 1937. Because of the expense, and because the Department believed no useful purpose would be served, it did not explore this carrier's 1938 rec-

ords. We believe the record will bear out our opinion that the Skagit river concern's business was on the upgrade in 1937 and that it further improved in 1938.

The Department was unable to discover adequate records of this company prior to 1934. Since that time, however, its records have been well kept. These records show that the company had an earned surplus of $23,542.79 as of December 31, 1937, and that it paid a dividend of $5,000 in 1937. Of this surplus $20,000 resulted from a lawsuit wherein the company received this sum in excess of the book value of the vessel "Harvester," which was sunk by another ship at the dock in Seattle.

Book Cost of Property

[1] The Department's accountant testified at the hearing that the records show the book cost of this respondent's property, used and useful in rendering public service in Washington, is $128,322.49 as of December 31, 1937. This was allocated as follows: interstate, $93,673.64, and intrastate, $34,648.85. We find these allocations and their results to be fair and reasonable.

Floating equipment was allocated on the basis of ton miles; docks, wharves, and real estate on the basis of tons on affected routes; office furniture and fixtures on the basis of tons of freight handled, and the lift truck of the vessel "Skagit Chief" to that vessel.

Working Capital

[2] The total operating expenses of this respondent were $99,528.88 for the year 1937. One-twelfth of this sum is $8,294.07. To this, we have added $1,112.69 in prepaid items found in respondent's books and we find that $9,406.76 is a fair and reasonable allowance for working capital, materials, and supplies. This we have allocated as follows: interstate, $7,048.24 and intrastate, $2,358.52. Allocation was made on the basis of previously allocated fixed capital.

Operating Revenues

During the year 1937, this company received revenues amounting to $107,324.55 for the transportation of freight. This we have allocated as follows: interstate, $86,959.54, and intrastate, $20,365.01. These revenues were divided between interstate and intrastate in accordance with the division thereof made by the company in its books.

Operating Expenses

[3] Operating expenses of this company for the year 1937 were $99,528.88 made up of $78,199.90 direct transportation expense and $21,328.98 not directly assignable to transportation. The direct transportation expense was allocated as follows: interstate, $55,269.91 and intrastate, $22,929.99. Expense other than direct was allocated: interstate, $6,049.76 and intrastate, $21,328.98. Different methods were used in making these allocations. Direct transportation expense was apportioned on the basis of ton-miles; indirect on the basis of tons of freight handled. Taxes were found to be $2,612.23, allocated as follows: interstate, $1,693.01 and intrastate, $919.22.

Depreciation

[4] The report of the Department's accounting staff shows that the recommendations of the Department's chief engineer in the Puget Sound Freight Lines investigation were followed as to the method of assigning lives to this company's vessels. Yet, lives of only twenty years were assigned to two of the company's boats because of the hazards of Skagit river navigation. Respondent objected to these assigned lives, pointing out that experience in the river operation plainly indicated that 30- or even 35-year lives were not unreasonable. We are inclined to agree with respondent. We have, therefore, assigned 35-year lives to the company's fleet of boats. Since we are using the book cost of property, undepreciated as a figure representing fair value, we find that the sinking-fund method of depreciation with interest at 4 per cent should be adopted. We believe, and we, therefore, find that the annual depreciation allowance for this company's properties should be $2,300.

Rate of Return

[5] During the years 1935 and 1936, this respondent suffered sharp losses of business and, consequently, showed, according to the Department's accountants, losses rather than profits on its combined interstate and intrastate business. In 1937, however, the curve of business took an upward turn and a rate of return of slightly less than 2 per cent has been calculated after allowances for all operating expenses and depreciation as discussed above.

The business in which this carrier is engaged is sharply competitive. In years when large volume moved, or when there were active markets for the products of the Skagit valley, this company was able to earn profits. At this time in 1940, if we are to judge from our studies and knowledge of other boat freight operations, this company is again earning profits.

Competitors contend that increases in rates should be ordered for this respondent. In fact, if respondent was now before us seeking rate increases we would be forced to consider such proposals very seriously. But respondent is not now asking for rate increases, but rather requests that we do not disturb existing tariffs. Respondent believes, probably with good cause, that rate increases now would only cause curtailment of traffic, and result in a decrease in revenues. We, therefore, believe that, although respondent may now be earning less than it could demand as a resonable rate of return on its fair value, yet it shows a profit. Considering the particular circumstances of this operation, we believe the public interest will be best served if we do not undertake to raise its rates. Not only does respondent render a valuable service to the public, but the public is entitled, we believe, to be served adequately by all forms of transportation. To drive this company out of the field by means of an unasked and unwanted increase in rates would be a public disservice.

Since respondent now charges what may be termed "reasonable minimum" rates for the service it renders, we will not disturb its present rates. Certainly, the public is receiving a service at a price it is willing to pay, and the company is willing to receive.

Re Safe Harbor Water Power Corporation

[Opinion No. 47, Docket No. IT-5494.]

Rates, § 13.1 — Powers of Federal Commission — Licensed electric project — Interstate wholesale service.

1. The Federal Power Commission has exclusive jurisdiction over a contract rate for the sale, in interstate commerce at wholesale, of electric energy produced by a federally licensed project, p. 239.

Return, § 14 — Basis — Federally licensed project — Investment.

2. The rate base in rate-making proceedings involving licensed projects is governed by Part I of the Federal Power Act, § 6 of which provides for acceptance of the terms and conditions of the act and license, and §§ 14 and 20 of which provide that the maximum rate base is the net investment if it does not exceed the fair value of the property, p. 240.

Valuation, § 39 — Rate base of licensed project — Exclusion of reproduction cost.

3. Evidence upon reproduction cost of a federally licensed power project is properly excluded as not relevant in determining the rate base, p. 241.

Valuation, § 330 — Going value — Federally licensed project.

4. A claim for going value is properly excluded in a proceeding to determine the rate base of a federally licensed power project, p. 241.

Valuation, § 67 — Rate base of licensed project — Original cost.

5. Net investment of a federally licensed power project, used as the rate base, means the actual legitimate original cost of the project, minus certain items, with an allowance for working capital, p. 241.

Depreciation, § 26 — Consistency — Annual and accrued.

6. The two aspects of the depreciation problem, annual depreciation and accrued depreciation, should be in agreement because the factors are identical which cause annual depreciation and accrued depreciation, and the principles are the same which govern the estimating of loss in service value for both accounting and rate-making purposes, p. 242.

Depreciation, § 31 — Limitation on service life.

7. Some reasonable limitation must be placed upon the service life of all constructed property and equipment, since neither constructed property nor a project itself would exist forever and property begins to depreciate from the moment of its use, p. 243.

Depreciation, § 50 — Power project — Maximum service life.

8. An estimate of 100 years as the maximum service life of a federally licensed power project was held to be reasonable for the present, rates of depreciation being subject to revision as more definite information becomes available, p. 243.

Valuation, § 107 — Accrued depreciation — Necessity of deducting reserve — Licensed power project.

9. Federal Power Act, § 3(13), requires the deduction of the depreciation reserve, if earned in excess of a fair return, in computing net investment and, therefore, the rate base of a licensed power project, p. 243.

Valuation, § 102 — Accrued depreciation — Sinking-fund method — Use with undepreciated rate base.

10. The sinking-fund depreciation method is employed only with an undepreciated rate base, since under the sinking-fund principle the entire service value is not charged to operating expense, but only the annuity is classified as an operating expense while the calculated interest is charged to nonoperating expense, p. 243.

Valuation, § 90 — Accrued depreciation — Compound-interest method — Deduction of reserve.

11. The depreciation reserve should be deducted in determining the rate base when the compound-interest method (sometimes called the modified sinking-fund method) is used, since when this method is used both the annuity and the interest element are treated as operating expenses, p. 243.

Valuation, § 98 — Accrued depreciation — Compound-interest method — Straight-line or sinking-fund method.

12. The 4¼ per cent compound-interest depreciation method was employed rather than the straight-line or sinking-fund method in determining the deduction for accrued depreciation of a federally licensed power project, p. 243.

Return, § 87 — Electric company — Federally licensed power project.

13. An average return of 5.62 per cent on net investment of a federally licensed power project, actually earned during a development period which occurred in a great economic depression, was held to be fair in determining the adequacy of past return after provision for depreciation reserve so as to justify deduction of the reserve to determine the rate base, p. 243.

Valuation, § 288 — Working capital — Power project.

14. Working capital, which includes cash, materials, and supplies, is part of the investment of a federally licensed power company upon which it is entitled to earn a fair return, p. 245.

Return, § 15 — Reasonableness.

15. A proper rate of return is a flexible concept and not a static rule, and what return is proper necessitates the exercise of enlightened judgment in each case, p. 245.

Return, § 35 — Reasonableness — Business conditions.

16. Current conditions are controlling and general conditions affecting all business should be considered in determining the reasonableness of return, p. 245.

Return, § 24 — Reasonableness — Credit maintenance — Capital attraction.

17. The return should be sufficient to assure confidence in the financial soundness of a public utility, to maintain its credit, and to attract the required capital, p. 245.

Return, § 44 — Reasonableness — Locality and risk.

18. The propriety of the allowed return depends largely upon the circumstances, locality, and risk of the utility enterprise, p. 245.

Return, § 25 — Reasonableness — Earnings of other business.

19. The return should be equal to that generally being made at the same time as in the same general region on investments in other enterprises which have corresponding risks, p. 245.

Return, § 26 — Reasonableness — Cost of money.

20. The historical cost of money to the utility and the current cost of money should be considered in determining the reasonableness of return, p. 245.

Return, § 22 — Reasonableness — Corporate structure — Past operations.

21. A utility's corporate structure, financial history, and past operations should be considered in determining a reasonable return, p. 245.

Return, § 36 — Reasonableness — Efficiency of management.

22. The return should reflect, among other things, due recognition of efficiency or lack of efficiency in management, p. 245.

Return, § 22 — Reasonableness — Taxes and development — Character of service.

23. The future prospects of the utility, its taxes and development, the potential stimulation from reduced rates, and the character of the service should be considered in determining a reasonable return, p. 245.

Return, § 87 — Federally licensed power project.

24. A fair rate of return for a federally licensed power project was held to be 6 per cent on the net investment plus working capital, p. 245.

Rates, § 302 — Automatic adjustment provision — Federally licensed power project.

25. Provision was made for automatic rate adjustment in the case of a federally licensed power project on the basis of changes in actual legitimate original cost, depreciation reserve, and working capital requirements, p. 247.

Return, § 11 — Basis — Prudent investment.

Discussion by Federal Power Commission of the desirability of prudent investment as the basis for rate making, p. 249.

(Scott, Commissioner, dissents.)

[June 11, 1940. Rehearing denied July 23, 1940.]

PROCEEDING *under § 20, Part I, of the Federal Power Act to determine reasonableness of rates for electric energy produced at a federally licensed power project; rate revisions ordered and provision made for automatic rate adjustment in the future.*

APPEARANCES: George T. Hambright, E. M. Sturtevant, and Charles Markel, Counsel, for Safe Harbor Water Power Corporation; Intervener, Joseph Sherbow, People's Counsel to the Public Service Com-

mission of Maryland; David W. Robinson, Jr., General Counsel, Milford Springer and Reuben Goldberg, Counsel, for the Federal Power Commission.

By the COMMISSION: This proceeding arises under § 20, Part I, of the Federal Power Act, 16 USCA § 813. The question involved is whether the Safe Harbor Water Power Corporation, operating its hydroelectric project under Federal Power Commission license No. 1025, is receiving more than a fair return upon the allowable rate base.

History of the Case

Safe Harbor Water Power Corporation obtained a license from the Federal Power Commission in 1930 to construct and operate a large hydroelectric project on the Susquehanna river about 8 miles south of Lancaster, Pennsylvania. On June 1, 1931, Safe Harbor Water Power Corporation contracted to sell all the electric energy available from its initial 6-unit development to its parent companies, Consolidated Gas Electric Light and Power Company of Baltimore and the Pennsylvania Water & Power Company.[1] Lump sum annual payments were made until 1938, and beginning January 1, 1938, the annual payments under the contract were such as to yield to the Safe Harbor Corporation a net operating income of 7 per cent, after deducting all reasonable operating expenses, on its accumulated actual legitimate original cost in the initial development, averaged for the year in question. This is regardless of the amount of electric energy furnished.

On November 9, 1937, the Commission instituted an investigation upon its own motion to determine whether the wholesale rate under that 1931 tripartite contract is reasonable.

After appropriate public notice, public hearings were held in October and November of 1939. During the nine days of the proceeding, sixty-six exhibits were introduced into evidence, nine witnesses testified, and approximately nine hundred pages of oral testimony were taken. By February 5, 1940, briefs had been filed by counsel for Safe Harbor Corporation, people's counsel to the Public Service Commission of Maryland, and counsel for the Federal Power Commission.

Jurisdiction of the Federal Power Commission

[1] The facts show, and counsel for Safe Harbor Corporation and this Commission have stipulated, that the electric energy produced by the Safe Harbor project enters into interstate commerce. Under the tripartite contract of 1931 the electric energy generated at the Safe Harbor project is sold at wholesale to the two parent companies for resale. Although this Commission has jurisdiction over the rate here by virtue of its authority under Part II of the Federal Power Act, which provides for the regulation of "the sale of electric energy at wholesale in interstate commerce," the Commission has asserted its jurisdiction in this case under Part I of the Federal Power Act, which applies to licensed projects.

[1] Consolidated Gas Electric Light and Power Company owns two-thirds of the outstanding stock and Pennsylvania Water & Power Company owns one-third. Each company is entitled to electric energy from the project in the proportion of stock ownership.

The pertinent portion of § 20, Part I, of the Federal Power Act, *supra,* referring to electric energy produced by a licensed project like Safe Harbor, provides:

"That when said power or any part thereof shall enter into interstate or foreign commerce the rates charged and the service rendered by any such licensee, . . . shall be reasonable, nondiscriminatory, and just to the customer and all unreasonable discriminatory and unjust rates or services are hereby prohibited and declared to be unlawful; and whenever any of the states directly concerned has not provided a Commission or other authority to enforce the requirements of this section within such state . . . jurisdiction is hereby conferred upon the Commission, upon complaint of any person aggrieved, upon the request of any state concerned, or upon its own initiative to enforce the provisions of this section, to regulate and control so much of the services rendered, and of the rates and charges of payment therefor as constitute interstate or foreign commerce. . . ."

Under the authority of § 20 of the act and the case of Rhode Island Pub. Utilities Commission v. Attleboro Steam & Electric Co. (1927) 273 US 83, 71 L ed 549, PUR1927B 348, 47 S Ct 294, the Federal Power Commission has exclusive jurisdiction over the contract rate for the sale of electric energy at wholesale in interstate commerce in this proceeding. See Ninth Annual Report of the Federal Power Commission (1929) pp. 119–131. It is impossible, therefore, for any state Commission to have jurisdiction over the interstate wholesale rate in this proceeding. Of course, this would not be true of interstate retail or intrastate rates which are within the jurisdiction of duly authorized state Commissions.

Rate Base

[2] Safe Harbor Corporation's license was issued pursuant to the provisions of the 1920 Federal Water Power Act. In 1935 Congress amended the Federal Water Power Act for clarification purposes and reënacted it as Part I of the present Federal Power Act.[2]

The rate base in rate-making proceedings involving licensed projects is governed by Part I of the Federal Power Act. Section 6, under Part I of the act, 16 USCA § 799, provides:

"Licenses under this part shall be issued for a period not exceeding fifty years. Each such license shall be conditioned upon acceptance by the licensee of all the terms and conditions of this act and such further conditions, if any, as the Commission shall prescribe in conformity with this act, which said terms and conditions and the acceptance thereof shall be expressed in said license. . . ."

Safe Harbor Water Power Corporation accepted in writing all the terms and conditions of the act and license. It, therefore, has agreed to accept the statutory rate base prescribed in Part I of the Federal Power Act. Section 20 of the act provides that:

"In any valuation of the property of any licensee hereunder for pur-

[2] Senate Report No. 621, 74th Congress, 1st Session, p. 17; House of Representatives Report No. 1318, 74th Congress, 1st Session, p. 7; Conference Report, H. R. No. 1903, 74th Congress, 1st Session (1935) §§ 212, 213, p. 47.

poses of rate making, no value shall be claimed by the licensee or allowed by the Commission for any project or projects under license in excess of the value or values prescribed in § 14 hereof for the purposes of purchase by the United States. . . ."

Thus § 20 prescribes the maximum rate base that may be claimed or allowed and refers to § 14, 16 USCA § 807, which provides:

". . . the United States shall have the right upon or after the expiration of any license to take over and thereafter to maintain and operate any project . . . upon the condition that before taking possession it shall pay the net investment of the licensee in the project or projects taken, not to exceed the fair value of the property taken, . . .; such net investment shall not include or be affected by the value of any lands, rights of way, or other property of the United States licensed by the Commission under this act, by the license or by good will, going value, or prospective revenues; nor shall the values allowed for water rights, rights of way, lands, or interest in lands be in excess of the actual reasonable cost thereof at the time of acquisition by the licensee. . . ."

The application of §§ 20 and 14 of the act shows that the starting point for determining the rate base in this case is the net investment because it does not exceed the fair value of the property.[3] Counsel for Safe Harbor Corporation and for this Commission stipulated that the net investment in the project does not exceed the fair value of the property. The Safe Harbor project was constructed from 1930 to 1935. It is common knowledge that it was a period of prevailing low construction costs, and that construction costs have increased since that time and the Commission may take judicial notice of the fact that net investment does not exceed the fair value of the project. Dayton Power & Light Co. v. Ohio Pub. Utilities Commission (1934) 292 US 290, 311, 78 L ed 1267, 3 PUR(NS) 279, 54 S Ct 647.

[3, 4] Under the authority of §§ 20 and 14 of the act, *supra,* the Trial Examiner properly excluded evidence upon the reproduction cost of the project as not relevant when counsel for Safe Harbor Corporation stated that fair value was greater than net investment. Also, the Trial Examiner acted in accordance with §§ 20 and 14 of the Act, *supra,* when he excluded Safe Harbor Corporation's Claim for "going value."

[5] Net investment as defined in § 3(13) of the act, *supra,* means the actual legitimate original cost of the project minus certain items.

By order, dated June 22, 1937, this Commission determined the actual

[3] Section 3(13) of the Federal Power Act, 16 USCA § 796(13) contains this definition: "'Net investment' in a project means the actual legitimate original cost thereof as defined and interpreted in the 'classification of investment in road and equipment of steam roads, issue of 1914, Interstate Commerce Commission,' plus similar costs of additions thereto and betterments thereof, minus the sum of the following items properly allocated thereto, if and to the extent that such items have been accumulated during the period of the license from earnings in excess of a fair return on such investment: (a) Unappropriated surplus, (b) aggregate credit balances of current depreciation accounts, and (c) aggregate appropriations of surplus or income held in amortization, sinking fund, or similar reserves, or expended for additions or betterments or used for the purposes for which such reserves were created. . . ."

legitimate original cost of the Safe Harbor project as of December 31, 1932. The United States circuit court of appeals for the third circuit affirmed that order, with a slight modification, so that approved project cost totaled $24,858,399.24 for the end of 1932. By order of May 14, 1940, the Commission determined the actual legitimate original cost of the project for the period from January 1, 1933, to December 31, 1937, to be $3,081,-314.60, which produces a total approved actual legitimate original cost of the project of $27,939,713.84 as of December 31, 1937. For the purpose of this case, but for this purpose only, the Commission will include Safe Harbor Corporation's claimed net additional project costs from December 31, 1937, to December 31, 1939. This produces a grand total cost in round numbers of $28,600,000 to 1940. We shall use $28,600,000 as the starting point in testing the reasonableness of present earnings in this case.

Depreciation

[6] The definition of depreciation in the Commission's Uniform System of Accounts Prescribed for Public Utilities and Licensees is:

" 'Depreciation,' as applied to depreciable electric plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand, and requirements of public authorities."

There are two phases to the depreciation problem, one relates to the annual expense for depreciation and the other to the accrued depreciation in the property on a certain date. The two aspects should be in agreement because the factors are identical which cause annual depreciation and accrued depreciation. The principles are the same which govern the estimating of loss in service value for both accounting and rate-making purposes. Re Interstate Power Co. (Fed PC 1939) Op. No. 41, p. 17, 32 PUR(NS) 1; Depreciation Charges of Telephone and Steam Railroad Companies (1931) 177 Inters Com Rep 351, 408.

In 1934, Safe Harbor Water Power Corporation, complying with the Commission's rules and regulations, filed its depreciation plan which it intended to follow and has followed up to the present time. It has used the 4¼ per cent sinking-fund depreciation method. In that method the annual depreciation charges are so computed that the amount charged to operating expense as depreciation plus 4¼ per cent interest (charged to nonoperating expense) on the accumulated amounts in the depreciation reserve will equal the service value of property at the expiration of its service life. Under this plan only the so-called annuity is recorded as a depreciation charge, the interest accruals on the accumulated amounts not being regarded as part of the depreciation charge but as a separate item in the nature of interest expense. The 4¼ per cent compound-in-

terest depreciation method, which we discuss later, is the same as Safe Harbor Corporation's sinking-fund method except that in the compound-interest method both the annuity and the interest accurals on the accumulated amounts are treated as depreciation charges which the consumer pays.

[7] Safe Harbor Corporation's depreciation reserve totaled $937,028 on December 31, 1939. That reserve was accumulated by using the 4¼ per cent sinking-fund depreciation method. We approve the service lives used by the corporation, but certain classes of property which Safe Harbor Corporation has listed as nondepreciable should have reasonable service lives placed upon them and we approve the service lives recommended by experts on the Commission's staff in Exhibit No. 23, Table 1. The limitations of 100-year and 30-year service lives, placed on property which Safe Harbor Corporation classified as nondepreciable and to which it assigned indefinite service lives, are based upon a thorough study of the subject of depreciation. Safe Harbor Corporation's depreciation witness admitted that the constructed property which the corporation classified as nondepreciable, chiefly the concrete dam, would not last forever. and that the Safe Harbor project itself would not exist forever. Some reasonable limitation must be placed upon the service life of all constructed property and equipment. We know that while, as far as physical inspection reveals, the project appears to be nearly as good as ever, certain forces have been working which will continue and inevitably terminate the useful life of the project. Property begins to depreciate from the moment of its use.[4]

[8] It must be remembered that the problem of recording depreciation is primarily one of making a reasonable allocation of total cost to the periods of operation of an asset, in other words, to the revenues produced. Since the use of this project will become uneconomical some day and the controlling depreciation is functional rather than physical, we find that the estimate of 100 years as the maximum service life is reasonable for the project at present. The rates of depreciation, of course, are subject to revision as more definite information becomes available.

If Safe Harbor Corporation had employed the service lives which we now prescribe for the property it classified as nondepreciable, its depreciation reserve would have totaled $1,139,805 on December 31, 1939. If Safe Harbor Corporation had used the 4¼ per cent compound-interest method for accounting for depreciation, its depreciation reserve would have been identical, or $1,139,805 at the end of 1939.

[9–13] Section 3(13) of the Federal Power Act, 16 USCA § 796(13) requires the deduction of the depreciation reserve (if earned in excess of a fair return) in computing net investment and, therefore, the rate base, of this licensed project. The sinking-fund depreciation method is employed only with an undepreciated rate base. This is so because under the sinking-fund principle, the entire service value (cost less net salvage) is not charged

[4] Knoxville v. Knoxville Water Co. (1909) 212 US 1, 13, 53 L ed 371, 29 S Ct 148.

to operating expense, but only the annuity is classified as an operating expense, the calculated interest (frequently the larger element) being charged to nonoperating expense.

There is another method, called the compound-interest method, or sometimes the modified sinking-fund method, which accumulates a reserve in the manner and to the same degree as the sinking-fund method, but under which the reserve would be deductible in computing net investment. Under the so-called compound-interest method, both the annuity and the intereset element are treated as operating expenses (under the title of depreciation) hence the full service value of depreciable property is charged to operations and accordingly the resulting depreciation reserve should be deducted in determining the rate base.

Careful consideration has been given the straight-line method. That method would have accumulated a reserve of $2,081,932 in excess of the 4¼ per cent sinking-fund method or 4¼ per cent compound-interest method as of December 31, 1939, had it been applied from inception of operations to that date. The company filed its depreciation method with the Commission several years ago and has been following that method consistently with the Commission's knowledge. Considering all the circumstances in this case, it is believed that the 4¼ per cent compound-interest depreciation method should be employed rather than the straight-line or sinking-fund method. The decision on this subject in this case should not be construed as establishing a precedent for a particular depreciation method for all licensed hydroelectric projects.

In prescribing, for Safe Harbor Corporation's future depreciation accounting, the 4¼ per cent compound-interest method based upon the approved service lives of the property, the Commission is aware of the corporation's duty to establish and maintain adequate depreciation reserves and the public's interest in the promotion of good service and the prevention of the impairment of the capital investment in this project. Section 10(c) Federal Power Act, 16 USCA § 803(c); Knoxville v. Knoxville Water Co. (1909) 212 US 1, 14, 53 L ed 371, 29 S Ct 148.

Now we approach the problem of the amount of depreciation reserve to be deducted from cost for rate making in this case.

The rate base in this case must be the net investment in the project plus a reasonable allowance for working capital. Section 3(13) of the Federal Power Act, *supra,* defines net investment as the actual legitimate original cost minus, among other items, "aggregate credit balances of current depreciation accounts" to the extent that they have been accumulated in excess of a fair return on such investment.

Safe Harbor Corporation earned an average rate of return of 5.45 per cent on its *actual legitimate original cost* plus working capital from the date of commencement of commercial operations to December 31, 1939, according to its own method of computing operating income. This average rate will have increased to over 5.5 per cent by June 30, 1940, because since January 1, 1938, the contract rate has been 7 per cent on actual legitimate original cost. Applying the 4¼ per cent compound-interest method to the period

under review, but using actually recorded figures for depreciation, the average return to June 30, 1940, will have been 5.62 per cent on *net investment*, it is estimated.

In view of the fact that the revenues during this period were fixed by affiliated companies dealing with each other, together with the fact that we are considering a developmental period which occurred in a great economic depression, we find that Safe Harbor Corporation's average rate of return for the period was fair. The deduction of the book depreciation reserve as of June 30, 1940, is therefore justified under the provisions of §§ 3 (13), 14, and 20 of the act, *supra*.

Although the depreciation reserve requirement at the end of 1939 was $1,139,805 computed upon either the 4¼ per cent sinking fund or 4¼ per cent compound-interest basis, using our prescribed service lives, the relative difference between that and the book reserve is not substantial, so to do justice to both the utility and the customers we find the book reserve to be the practical and equitable measure of accrued depreciation to be deducted from the actual legitimate original cost in this case.

Working Capital

[14] For rate-making purposes we consider working capital, which includes cash, materials, and supplies, as part of Safe Harbor Corporation's investment upon which it is entitled to earn a fair return. The chief accountant of the corporation testified that $200,000 would be sufficient to meet the working capital requirements of the project in the near future. This amount recognizes the progressive trend in the working capital requirements which the corporation has experienced, the predicted increase in maintenance costs, and the upward trend in prices for materials and supplies. We find that $200,000 is a proper allowance for working capital to be added to the depreciated rate base in this case.

Rate of Return

[15–24] The United States Supreme Court has stated that "what will constitute a fair return in a given case is not capable of exact mathematical demonstration" and that "it is a matter more or less of approximation about which conclusions may differ." United R. & Electric Co. v. West, 280 US 234, 251, 74 L ed 390, PUR1930A 225, 50 S Ct 123. From an examination of the decisions of the United States Supreme Court, other courts and Commissions, certain recognized principles surrounding the problem of return can be derived. The factors underlying the determination of a fair return can be summarized as follows:

1. A proper rate of return is a flexible concept and not a static rule.

2. What return is proper necessitates the exercise of enlightened judgment in each case.

3. Current conditions are controlling, and general conditions affecting all business should be considered.

4. The return should be sufficient to assure confidence in the financial soundness of the utility, maintain its credit, and attract the required capital.

5. The propriety of the allowed return depends largely upon the circumstances, locality, and risk of the utility enterprise.

6. The return should be equal to that generally being made at the same time and in the same general region on investments in other enterprises which have corresponding risks.

7. The historical cost of money to the utility, and the current cost of money should be considered.

8. A utility's corporate structure, financial history, and past operations should be considered.

9. The return should reflect, among other things, due recognition of efficiency or lack of efficiency in management.

10. The future prospects of the utility, its taxes and development, the potential stimulation from reduced rates, and the character of the service should be considered.

We note that the allowed rates of return for public utilities show a trend from 6 per cent before the first World War to 8 per cent before the depression of the last decade, and since that depression to 6 per cent again.

The record includes comprehensive economic information on the subject of rate of return, which shows general interest rates and yields, utility interest rates and yields, general economic conditions, comparative risk data, financial history of Safe Harbor Corporation and its parent companies, local conditions, and Safe Harbor Corporation's position in a unified and coördinated power system.

The evidence reveals the marked stability of earnings of utility corporations as compared with those of railroad and industrial corporations. There has been a decline in interest rates and return on money in the last decade. Safe Harbor Corporation's project is an integral part of a coördinated power system in a region with extensive industry, agriculture, and a large population. Safe Harbor Corporation has the interested financial support of its parent companies. Safe Harbor Corporation has shown skill and high efficiency in the development and management of its project. During the developmental period of 1932 to 1939 the increasing capacity of the project was coördinated economically with the existing regional power system. Safe Harbor Corporation's project has been financed through the issuance of first mortgage sinking-fund gold bonds, 4½ per cent series due in 1979 in the amount of $21,000,000, and capital stock purchased by its two parent companies, totaling $9,000,000.

We have reviewed the seven cases in 1939 in which courts and Commissions prescribed 6 per cent as a reasonable rate of return for electric, gas, telephone, and bridge utilities. The Illinois supreme court held in 1939 that a rate of return slightly more than 5 per cent was not confiscatory, but the court emphasized the difference between a reasonable rate of return and a nonconfiscatory one, and the rate base was fair value there as distinguished from the net investment base used in this case. Peoples Gas Light & Coke Co. v. Slattery (1939) 373 Ill. 31, 31 PUR(NS) 193, 217, 25 NE (2d) 482.

After a consideration of the comprehensive evidence in this case and applying it to the recognized factors underlying the determination of a fair rate of return, we find that for the present and the near future the fair rate of return for Safe Harbor Water Power Corporation is 6 per cent on its

net investment plus working capital. That rate of return will be just to consumers and protect the interests of investors.

Rate Reduction

Comparing the rate base, net operating income and the rate of return found to be fair in this case, we find that a reduction must be made in Safe Harbor Corporation's total compensation under the contract of June 1, 1931.

We accept Safe Harbor Corporation's statement of annual operating expenses and taxes, which appear to be reasonable. The 1940 annual expense for depreciation on the prescribed 4¼ per cent compound-interest method will be about $193,654. Safe Harbor Corporation stated that it had rate case expenses totaling $26,518 and we find that they should be amortized over a 5-year period.

Dealing in round numbers the following computation illustrates the method to be pursued and indicates the approximate rate reduction to be made in this case:

1. Original cost 12-31-39	$28,600,000
2. Reserve for depreciation	937,000
3. Net	$27,663,000
4. Working capital	200,000
5. Approximate rate base	$27,863,000
6. Rate of return	6%
7. Fair return	$1,672,000
8. Estimated return under contract	1,962,000
9. Excess	$290,000
10. Savings in taxes	60,000
11. Estimated reduction in contract rate	$350,000

Automatic Rate Adjustment Provision

[25] No consideration has been given to the new 25-cycle unit which is being installed or to the working capital requirements which will result from that installation because those will be provided for automatically under the rate adjustment procedure which we prescribe in this case.

According to present plans, Safe Harbor Corporation's project will not have a major addition for many years after the new unit is installed this year. This condition will facilitate Safe Harbor Corporation's adjustment of its own rate annually on the formula to be prescribed. The 6 per cent rate of return will control Safe Harbor Corporation's compensation on the allowable rate base, adjusted annually, and no more rate proceedings will be required until economic conditions so change as to necessitate an adjustment in that rate of return. Safe Harbor Corporation will be required to determine annually its claimed actual legitimate original cost, by starting with the most recent determination of actual legitimate original cost by this Commission, and adding the cost of additions and betterments and subtracting the cost of retirements. The corporation will be required to subtract from the cost thus ascertained the existing depreciation reserve based on the 4¼ per cent compound-interest method to ascertain the depreciated cost. To this balance shall be added working capital requirements to establish the allowable rate base. The claimed actual legitimate original cost and the depreciation reserve shall be averaged for the year in computing the rate base. The annual return or operating revenue to which Safe Harbor Corporation will be entitled shall be computed by multiplying that rate

base by the 6 per cent. This return, plus operating expenses, can then be charged to Safe Harbor Corporation's two parent-customer companies. This is a simple and practicable plan for annual automatic rate adjustments and is similar to the procedure employed by Safe Harbor Corporation under its 1931 power contract, which is the subject of this proceeding and which shall be modified to conform with our findings. From time to time the Commission will make such investigation of claimed actual legitimate original cost, depreciation, and operating expenses as appears to be appropriate.

Findings of Fact

Based upon a consideration of the evidence, we may summarize the findings of fact, which have been stated heretofore in greater detail, as follows:

1. The electric energy produced by the licensed Safe Harbor hydroelectric project is transmitted, in large part, from the project in Pennsylvania to Consolidated Gas Electric Light and Power Company of Baltimore.

2. Safe Harbor Corporation sells its entire electric energy output to Pennsylvania Water & Power Company and Consolidated Gas Electric Light and Power Company of Baltimore for resale.

3. The actual legitimate original cost of the Safe Harbor project as of December 31, 1937, was $27,939,-713.84. (For treatment of additional claimed cost to 1940 see p. 8.)

4. Safe Harbor Corporation's book reserve for depreciation totaled $937,-028 on December 31, 1939.

5. Working capital requirements for the near future will be $200,000.

6. The service lives for classes of property recommended by the Commission's staff in Exhibit No. 23, Table 1, are proper and reasonable and should be adopted by the Safe Harbor Corporation in its accounting for depreciation.

7. The 4¼ per cent compound-interest method of determining depreciation is the method most adaptable to this case and should be employed by the Safe Harbor Corporation.

8. Under the facts and circumstances of this case, 6 per cent is a fair rate of return on net investment (actual legitimate original cost, less depreciation reserve) plus working capital.

9. Safe Harbor Corporation's rate case expenses totaling $26,518 are reasonable and should be amortized over a 5-year period.

Conclusions of Law

Based upon the foregoing findings of fact in this case, we conclude that:

1. The Federal Power Commission has jurisdiction over the Safe Harbor Water Power Corporation and the subject matter of this proceeding;

2. Net investment in the Safe Harbor project, plus working capital, is the proper rate base in this case;

3. Safe Harbor Water Power Corporation's 1931 contract wholesale rate for electric energy is unreasonable and unjust to the extent that it exceeds the amount we found to be fair, just, and reasonable;

4. The 1931 contract rate should be modified to provide for the lawful rate and we will fix by order the

method of determining, annually, the just and reasonable rate.

This is a rate case free from the complexities of ordinary rate cases and it demonstrates the fairness and practicability of the rate-making principle which employs the stable rate base and a flexible rate of return to meet changing economic conditions. Net investment as a rate base is definite, stable, and readily ascertainable. Net investment, under the Federal Power Act, is the equivalent of what Mr. Justice Brandeis termed "prudent investment" in the case of Missouri ex rel. Southwestern Bell Teleph. Co. v. Public Service Commission, 262 U S 276, 289, 67 L ed 981, PUR1923C 193, 43 S Ct 544, 31 ALR 807. The net investment rate base provided for licensed hydroelectric projects by the 1920 Congress reflects wisdom in the rejection of the fluctuating and speculative elements of "fair value" and the adoption of the stable net investment base. The "fair value" rule for rate making, with its speculative element of reproduction cost, has been demonstrated by experience to be delusive. In the attempt to apply the "fair value" rule insuperable obstacles have been encountered.[5] In our opinion, net investment, or its equivalent prudent investment, is the truest measure of fair value for public utility rate making. Net investment, or prudent investment, is based upon established facts and is not subject to the vagaries of theories, imagination, and abrupt fluctuations of prices and conditions. It eliminates unwarranted demands upon consumers through the projections of future rates upon ephemeral values and gives stability to rates, which minimizes the economic shocks from sharp fluctuations in prices. Under the Uniform System of Accounting, which has been prescribed by the utility industry by regulatory Commissions, it will be an economical procedure to use the net investment or prudent investment rate-making principle, and unwarranted expenditures by the utilities and the Commission, which are necessitated by the "fair value" rule, will be eliminated with consequent benefits to consumers, investors and taxpayers.

An appropriate order will be issued in accordance with this opinion, findings of fact, and conclusions of law.

Order

Upon consideration of the orders previously issued in this case, the evidence of record, the briefs filed, and the Commission having on this date rendered its Opinion No. 47, contain-

[5] For example, the Wisconsin Commission applied the "fair value" rule in a case which consumed five years. The utility had about 200 men engaged in an appraisal for two years. The Commission's appraisal work occupied about 100 man-years. 117,266 working papers were the basis for the Commission's appraisal exhibits. The Commission's accounting staff devoted about 25-man-years to its exhibits and accumulated 21,746 work sheets. The hearing required many weeks and resulted in a record of 12,106 pages of transcript and 413 exhibits. Re Wisconsin Teleph. Co. (1936) 13 PUR(NS) 224, 233. By contrast, all of the actual legitimate original cost determination proceedings involving the Safe Harbor hydroelectric project, plus the application of the statutory rate base of net investment founded on that cost in this rate proceeding, required only a small percentage of the time, effort, and expense necessitated by the Wisconsin Commission's "fair value" case. For a resumé of utility rate case histories which show the time-consuming process of the "fair value" rule, see Mr. Justice Brandeis' concurring opinion in St. Joseph Stock Yards Co. v. United States (1936) 298 US 38, 88, 80 L ed 1033, 14 PUR (NS) 397, 56 S Ct 720.

ing its findings of fact and conclusions of law, which are hereby incorporated by reference as part of and the basis for this order;

It is *ordered* by the Commission that:

(1) Safe Harbor Water Power Corporation revise its filed rate schedule FPC No. 1, dated June 1, 1931, so as to provide for a 6 per cent return on the average net investment in its licensed project plus working capital, as more fully set forth in the above opinion, said revised rate schedule to be effective on and after July 1, 1940;

(2) Safe Harbor Water Power Corporation shall file on or before August 1, 1940, a statement showing the computation, in accordance with the opinion, of its net investment and working capital as of July 1, 1940, and the estimated average amounts thereof for the period from July 1, 1940, to December 31, 1940; the estimated operating expenses, depreciation, taxes, and return for that period and the resulting estimated charges under its revised rate schedule;

(3) Safe Harbor Water Power Corporation shall file on or before February 15th of each year a statement showing, for the previous calendar year, the computation, in accordance with the opinion, of its average net investment and working capital, its operating expenses, depreciation, taxes, and return, and the resulting charges to its customers under said revised rate schedule.

SCOTT, Commissioner, dissenting; I am, with certain exceptions, in general agreement with the action of the majority in this proceeding. With due deference to their conclusions, however, I feel that the record in the instant case warrants Commission action more effectively protecting consumer interests. It seems worth while briefly to indicate my views.

The majority proposes to allow respondent a 6 per cent rate of return on the rate base here determined. Considering the factors underlying the determination of a fair rate of return, it would appear, from an examination of the record, that allowance to the respondent of any rate of return greater than 5½ per cent would, in my opinion, be excessive.

What does the record disclose concerning this matter? It includes, as the majority has indicated, comprehensive information on the subject of rate of return, which shows general interest rates and yields, utility interest rates and yields, general economic conditions, comparative risk data, financial history of the respondent and its parent companies, local conditions, and the respondent's position in a coördinated power system.

The marked stability of earnings of utility corporations as compared with those of railroad and industrial corporations is developed in the record. The decline in interest rates and return on money is shown. The strategically favorable location of the Safe Harbor hydroelectric development in one of the country's great industrial, rich agricultural, and thickly populated areas is disclosed. The advantage to the respondent of the interested financial support of its parent companies, the Consolidated Gas Electric Light and Power Company of Balti-

more and the Pennsylvania Water and Power Company, as evidenced by their 100 per cent ownership of its capital stock, and their unconditional guaranty of the principal and interest on its bonds, is revealed by the record. Another advantage disclosed is the coördination of respondent's facilities with its parents' systems under a long-term contract running until 1980, permitting a greater utilization of its facilities and tending to eliminate conditions likely to create a competitive situation.

The foregoing facts are undisputed and significant. What is of greater significance in this record is the obvious indifference displayed by the Safe Harbor Corporation to consumers' interests, as evidenced by its failure to take advantage of currently available low interest rates. The project here involved was financed through the issuance of 4½ per cent bonds due in 1979, in the amount of $21,000,000, of which less than $1,000,000 have been retired, and capital stock purchased by its two parent companies, totaling $9,000,000. These bonds now are selling, and in 1939 and for several years have sold, at an average price substantially in excess of the call price.[6] The Consolidated Company during the last two years has successfully floated refunding bond issues at 3 per cent and 3¼ per cent, yielding as low as 2.75 per cent to the investor. In response to inquiry on cross-examination as to whether there were any reasons why the Safe Harbor company could not take advantage of the favorable money market then prevailing, the company's expert financial witness, who had testified to an extensive experience and study of new projects and reorganizations in the public utility field and to familiarity with Safe Harbor and its parent companies, stated:

"I don't know, I don't know. I have not studied it from that point of view. I worked on lots of refunding proposals, but I have not worked on that one, because I have never been told to do so."

This witness earlier had admitted that if Safe Harbor were being financed in 1939, the coupon rate would have been definitely less than 4½ per cent.

The record contains an abundance of evidence showing advantages accruing to the Safe Harbor company, factors contributing to a favorable market for its securities, in addition to the interest and support of its financially strong and successful parent companies. In contrast, the record is totally bare of evidence showing any effort on the part of the Safe Harbor company to take advantage of the low interest rates currently available in the then prevailing favorable money market.

If, for no other purpose than to encourage the refunding of the bonded debt at a rate in harmony with the prevailing level of interest rates, the rate of return to this utility should, in my opinion, be reduced to 5½ per cent. Obviously, it is a public utility policy to stay in debt. Bonded debts are refunded and increased, but seldom extinguished. In the affiliated group of the Consolidated, Pennsylvania, and

[6] Prior to June 1, 1936 call price was 105; thereafter for a period of five years, 104.

Safe Harbor companies, a fair return on the $9,000,000 of equity money would, the record discloses, be assured, if this Commission were to reduce the rate of return to 5½ per cent.

Such a reduction, it would appear, should result in a prompt refunding of bonds and, consequently, substantial savings in interest, more than compensating for the reduction in respondent's revenues. The parent companies (Consolidated and Pennsylvania), as indicated, own all the Safe Harbor stock. These corporations, as investors, are earning a higher rate of return on their common stock investment in Safe Harbor, the record reveals, than present purchasers in the public market of common stock of either parent company. A reduction in the rate of return from 7 per cent to 5½ per cent, instead of to 6 per cent as proposed by the majority, would assure an additional saving to consumers to which, I believe, they are clearly entitled on the evidence in this proceeding.

When we say that with a 5½ per cent rate of return the return on equity money would be sufficient, it should not be forgotten that profits on the use of borrowed money will be accruing to Safe Harbor's parent companies. While the courts approve profits on borrowed money on the theory that it compensates the owners of the utility for risk, I believe this Commission should be entitled both to consider such profit and to appraise that risk in determining a fair rate of return.

I cannot acquiesce in the adoption of a 6 per cent rate of return in this proceeding, particularly, when respondent has made no effort to take advantage of favorable conditions for refunding its bonded debt. A 6 per cent rate, I believe, fails properly to consider the interests of the consuming public. A reduction from the present rate of return to one of 5½ per cent would effect a reduction approximating one-half million dollars in the energy cost to respondent's parent companies, which, assuming it were to be passed on, would more adequately protect the interests of the ultimate consuming public.

It is my firm conviction that a 5½ per cent rate of return for the Safe Harbor Corporation would be fair, compensatory, and nonconfiscatory. Cf. Peoples Gas Light & Coke Co. v. Slattery (1939) 371 Ill 31, 31 PUR (NS) 193, 217–219, 25 NE(2d) 482. Accordingly, I find myself constrained to dissent from the majority.

Re Middle West Corporation et al.

[File No. 59-5, Release No. 2165.]

Intercorporate relations, § 19.8 — Integration proceedings — Hearing by trial examiner.

A motion to vacate an order appointing a trial examiner and for the Commission itself to sit and hear the evidence in an integration proceeding under § 11(b)(1) of the Holding Company Act, 15 USCA § 79k, was denied.

[July 10, 1940.]

PROCEEDING *under § 11(b)(1) of the Holding Company Act relating to integration of public utility holding companies; hearing date designated, limitation of issues prescribed, and motion to vacate order appointing trial examiner denied. Order clarified July 31, 1940.*

By the COMMISSION: This proceeding was instituted under § 11(b)(1) of the Public Utility Holding Company Act of 1935, 15 USCA § 79k, by notice and order dated March 1, 1940. That order directed that hearings on the issues set forth therein should commence on April 29, 1940, or such later date as the Commission might prior thereto fix by supplementary notice.

On March 22, 1940, an order was entered postponing until June 28, 1940, the commencement of such hearings, pursuant to a request therefor filed by the Middle West Corporation and the other subsidiary companies named in Par. 2 of Part I of the answer filed herein by the Middle West Corporation (said companies being hereinafter sometimes referred to as "Middle West and its acknowledged subsidiaries"). A request by the same companies for an additional postponement to July 29, 1940, filed June 20, 1940, was denied by order of that date.

Accordingly, hearings commenced before a trial examiner on the day designated—June 28, 1940. Middle West and its acknowledged subsidiaries again moved for an adjournment to July 29th, which motion was referred by the examiner to the Commission. At the same session, counsel for the Commission offered for the record certain exhibits consisting of the registration statements and annual supplements thereto filed by the Middle West Corporation and its registered subholding companies pursuant to § 5 of the Public Utility Holding Company Act of 1935, 15 USCA § 79e. Upon objection made, the examiner refused their admission until counsel for Middle West and its ac-

knowledged subsidiaries should have had a "reasonable" time to examine the proffered documents in order to state any objections to such admission. Counsel to the Commission excepted to that ruling. Oral argument was heard by us July 1, 1940, on such ruling, on the motion for adjournment, and on a motion by the same companies (made at the opening of the hearing June 29, 1940) to vacate the Commission's order appointing an examiner to hear evidence and for the Commission itself to sit and hear the evidence.

With respect to the requested adjournment, counsel for Middle West and its acknowledged subsidiaries have assured us that if the request is granted they will be able to proceed promptly on July 29th in presenting evidence on the system's southwestern properties—i.e., those controlled principally by Central and South West Utilities Company and American Public Service Company—although we are not persuaded that sufficient time has not already been given. However, on the understanding that counsel for respondents will be thus prepared to proceed without substantial interruption, we are disposed to grant the requested adjournment. Furthermore, in the interest of simplification we have decided that upon its reconvening the hearing shall be confined initially to the issues arising under § 11 (b) (1) of the act, *supra,* with respect to Central and South West Utilities Company and American Public Service Company alone. Jurisdiction will be reserved with respect to all other issues described in the notice of and order for hearing of March 1st.

This restriction of the scope of the proceedings will make necessary a revision by counsel to the Commission of the offer of documents to which objection was made. Since we believe the adjournment to July 29th will give counsel for Middle West reasonable opportunity to examine by that time any and all of such documents, the question of their admissibility at the hearing on June 28th becomes moot and we deem it unnecessary to pass on the examiner's ruling.

The motion to vacate the order appointing a trial examiner and for the Commission itself to sit and hear the evidence is denied. Morgan v. United States (1936) 298 US 468, 80 L ed 1288, 56 S Ct 906.

An appropriate order will issue. [Order omitted.]

By the Commission, Chairman Frank and Commissioner Henderson not being present and not participating herein.

PENNSYLVANIA SUPREME COURT

Re Butler Water Company

(— Pa —, 13 A(2d) 72.)

Crossings, § 74 — Separation of grade — Items of damage — Removing facilities.

The cost of removing a water company's facilities from its land, part of which was appropriated in abolishing a grade crossing, is not allowable as a separate item of damage but may be considered in fixing the difference in value of the property before and after the appropriation, which is the true measure of damages.

[May 6, 1940.]

APPEAL *from order dismissing exception to report of viewers in proceeding to determine damages due to taking of, injury to, and destruction of water company's property in consequence of order abolishing grade crossing; reversed and remitted.*

Argued before Schaffer, C. J., and Maxey, Drew, Linn, Stern, Barnes, and Patterson, JJ.

APPEARANCES: Lee C. McCandless, County Solicitor, of Butler, for appellant; J. Campbell Brandon and Brandon & Brandon, all of Butler, and Alfred T. Chabot, of New York city, for appellees.

SCHAFFER, C. J.: In this appeal by Butler county from the dismissal of its exception to the report of viewers, we have presented as the question involved: When an order of the Public Service Commission, from which no appeal was taken, abolished a grade crossing and directed that all public utilities remove their facilities within the new right of way at their own expense, under the provisions of the Act of July 17, 1917, PL 1025, as amended, 66 PS § 574, can a water company in a claim for damages, in addition to recovering damages for land taken, also recover the cost of removing its facilities as a separate and additional item of damage?

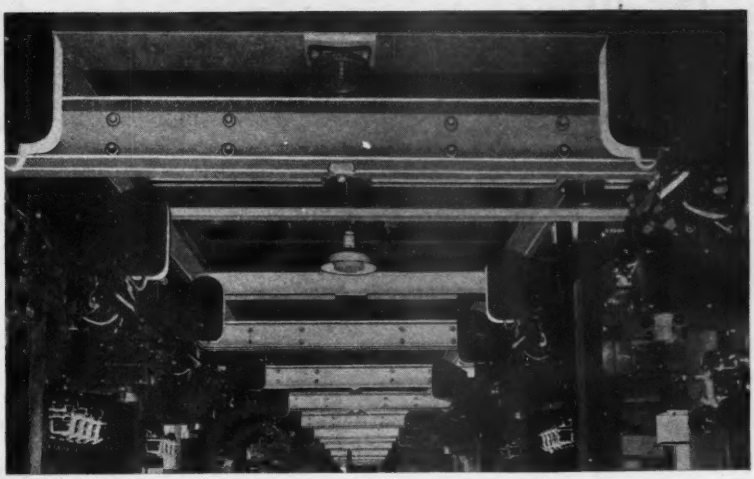
The report of the viewers awarded $900 for land taken and $2,647.85 for the relocation of facilities which, in the main, consisted of its pipes which could not be maintained in their original location because piers of the new overhead bridge were placed over them.

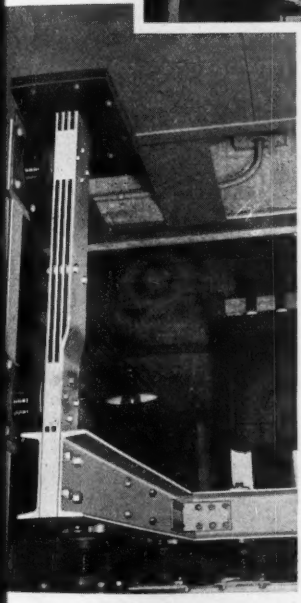
It is argued by appellant that because the water company is subject to regulation under the police power, the action of the Commission in compelling it, under the Act of 1917, at its own expense, to relocate its equipment and facilities, deprives the water company of any right to recover the ex-

pense of relocation in this proceeding. We are not prepared to go this far, nor do we think the position can be constitutionally justified. The order of the Commission and the Act of 1917 have no bearing on the question in issue here. As stated by the court below, "the act has nothing whatever to do with the right of a public service company to be compensated for property taken, injured or destroyed in the abolition of a grade crossing of a highway. It is regulatory and covers the power of the Commission to say what shall be done, by whom it shall be done and who shall pay for the doing in the first instance." This was recognized by the Commission itself when in a subsequent order it was stated that there was no intention to deprive the water company of damages. The facilities are on the water company's land, part of which is appropriated.

The award of the cost of removal of the facilities, however, cannot be justified as a separate item of damage. The true measure of damages is the difference between the value of the property before and after the appropriation. The cost of removal of things on the land to a different location is not allowable as a separate element of damage, but may be taken into account in fixing the before and after value. Becker v. Philadelphia & R. T. R. Co. (1896) 177 Pa 252, 35 Atl 617, 35 LRA 583; Philadelphia Ball Club v. Philadelphia (1899) 192 Pa 632, 44 Atl 265, 46 LRA 724, 73 Am St Rep 835. "Attempts have often been made to introduce particular items of damage . . . such as the cost of fencing, loss of business, expense of altering buildings, the value of minerals under the surface, . . . and many other distinct and independent matters, . . . but we have repudiated them all." Chambers v. South Chester (1891) 140 Pa 510, 522, 21 Atl 409, 410. The jury has no right to allow, as a distinct item of claim, the cost of removing a house from the bed of the street. Grugan v. Philadelphia (1893) 158 Pa 337, 27 Atl 1000. "Estimates as to the costs of rebuilding specific items of property or injury to particular uses affected by the taking are not recoverable or admissible as distinct items of damage, but such losses may become useful as elements bearing on the market value before and after the appropriation." Westinghouse Air Brake Co. v. Pittsburgh (1934) 316 Pa 372, 375, 176 Atl 13, 14.

The court below erred in dismissing the exception. Order reversed, and record remitted to court below for further proceedings.





Typical Aluminum bus installation at Irvin Works of Carnegie-Illinois Steel Corporation.

Built to take the "jolt" of a 300,000-amp short circuit

Able to withstand a pull of 630 pounds per foot between positive and negative buses; equivalent to a 300,000-ampere short circuit. That's the high factor of safety for which the main power buses at Carnegie-Illinois' Irvin Works are designed.

Main buses are 10-inch Alcoa Aluminum channels, mounted eleven feet seven inches apart. Smaller Aluminum channels form the branch circuits.

Aluminum buses provide the high current-carrying capacity required for steel mill circuits. They are tailored to fit the exact requirement of each job. Their light weight facilitates fabrication and erection. Joints are made by bolting or welding. Simple, inexpensive fittings are available.

Aluminum Company of America, 2134 Gulf Building, Pittsburgh, Pennsylvania.

Industrial Progress

Selected information about manufacturers, new products, and new methods. Also news on utility expansion programs, personnel changes, recent and coming events.

Public Service Electric & Gas Increasing Capacity

PUBLIC Service Electric & Gas Co., principal electric subsidiary of Public Service Corporation of New Jersey, recently placed an order for a 100,000 kilowatt generating unit, which with accompanying plant and transmission facilities will cost $11,500,000 and will be ready for operation in 1943. Early this year, the 1940 budget for the subsidiary was placed at $9,000,000 of a total program for the system aggregating $17,500,000.

According to officials, the expansion is in anticipation of future demands for electric power in the growing Trenton and Camden areas as well as the entire territory served by the company. The initial step in the construction of the Burlington plant was taken last fall, when a $12,000,000 generator and facilities were started to increase capacity of the plant from its present 55,000 kilowatts to 255,000 kilowatts.

Ultimately the station's capacity will be increased to 350,000 kilowatts and will be further integrated with other generating stations and inter-connecting transmission lines throughout the territory served by the company.

Since 1936 Public Service has allocated more than $60,000,000 for the expansion of its electric facilities in New Jersey.

Marchant Calculating Machine Steps Up Production

SUBSTANTIAL purchases of new equipment by Marchant Calculating Machine Co. to provide increased production capacity were announced by Edgar B. Jessup, president. Augmenting present facilities, the new equipment will afford both greater efficiency and economy in production while increasing the total output, he said. Only a small part of the new machinery will replace old equipment.

Returning from an extended trip through the industrial sections of the east, Mr. Jessup reported a general expansion in the Marchant field organization and the establishment of several new sales offices. Expansion of the sales and production forces, he said, were consistent with the growth of the company's business east of the Mississippi.

Philadelphia Electric Orders Large Turbo

THE Philadelphia Electric Company has placed an order with the Westinghouse Electric & Manufacturing Company for an 80,000 Kw. hydrogen-cooled turbine generator unit, a machine large enough to supply the electrical requirements of a city of a quarter of a million people. This is a part of a $4,600,000 expansion program to increase the generating capacity of the Chester Station. One of the largest 1800 r. p. m., single-cylinder turbines ever built by any manufacturer, it will be designed for inlet steam conditions of 250 pounds per square inch and 570 degrees Fahrenheit, exhausting at 29 inches of mercury vacuum. Some idea of the problems encountered in constructing a machine of this size may be gathered from the tremendous force exerted by the revolving low pressure blades. When operating at 1800 r. p. m., the metal in the tip of these blades exerts a force equal to over 7,000 times its own weight.

New Heating Units Offered

THE York Ice Machinery Corporation has developed three new Winter air conditioning units, E. R. Walsh, national supervisor of heating sales, announced recently.

These units are: the Yorkaire heat standard oil-fired air-conditioning furnace, which combines automatic oil heat with Winter air conditioning in one compact cabinet; the Yorkaire heat standard oil-burning boiler, for use with steam, vacuum, vapor, gravity hot water or forced hot water heating plants, and the Yorkaire heat vertical gas-fired air-conditioning furnace, for Winter air conditioning small bungalows, single-floor homes or apartments.

Treatment Reduces Corrosion

TREATING water with a small amount of chemicals, and controlling the amount of active acid present in the treated water will greatly decrease losses resulting from corrosion in air-conditioning systems, according to

the results of an experimental study of corrosion inhibitors made by the Metallurgy Division of the National Bureau of Standards.

By using a number of different inhibiting chemicals under various conditions such as might occur in actual operation of an air-conditioning system in which water is used, it was found that chromates constituted the best inhibitors, followed by silicates, phosphates and carbonates, in that order.

Results of the study are given in detail in Research Paper RP 1305, copies of which may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at five cents each.

New Coffee Service Offered By Silex Company

A COFFEE service which combines with a beautifully engraved chrome tray one of the popular Delray Electric Model Silex Glass Coffee Makers, is announced by The Silex

Company. Also included in the set are a sugar and creamer of sparkling, crystal-clear glass encased in shells of polished chrome.

Everything about this coffee service is designed to give a maximum of beauty and efficiency. The chrome and glass will blend with the color motif of any dining room set. The Glass Coffee Maker may be had in either ivory or black moldex trim.

This new Delray Coffee Service will sell for only $9.95, with black trim. Ivory trim will be $10.95.

Complete information concerning this set may be had by writing The Silex Company, Hartford, Conn.

J-M Employees Given Time for Defense Training

MORE than 110 Johns-Manville employees in various plants and offices engaged in military or naval training for three weeks during August in connection with the government's national defense program, company officials announced recently.

In accord with Johns-Manville's basic policy to support national defense by full coöperation with Army, Navy or Marine Corps authorities in the training of reserve or inactive personnel, the company makes up the difference in pay between what the government pays these men and what they would have earned if they had remained at work.

Consolidated Edison Orders Fourteen Air Blast Breakers

CONSOLIDATED Edison Company of New York, Inc., has ordered fourteen General Electric 15-kv air-blast breaker units, ranging from 500,000 kva to 2,500,000 kva interrupting capacity, for its Sherman Creek Station.

This is part of a modernization program to protect the largest concentration of power in this country. The breaker units are scheduled for shipment early in 1941.

New G-E Time Switch

TYPE T-52 time switch for controlling off-peak water heaters has been announced by the General Electric Co. Matching "A" type front-connected watthour meters, the new unit fits any standard watthour-meter connection box or trim and, according to the manufacturer, will reduce installation costs where both watthour meters and time switches are involved.

Adjustment of the new time switch is simply a matter of removing the glass cover from the standard meter base and setting the switch tripping time. Rated 40 amp., 240 volts, it employs positive make-and-break silver contacts and has a die-cast aluminum meter base. A sealable heavy glass cover provides protection against weather and tampering. The time switch is timed and powered by a Telechron motor.

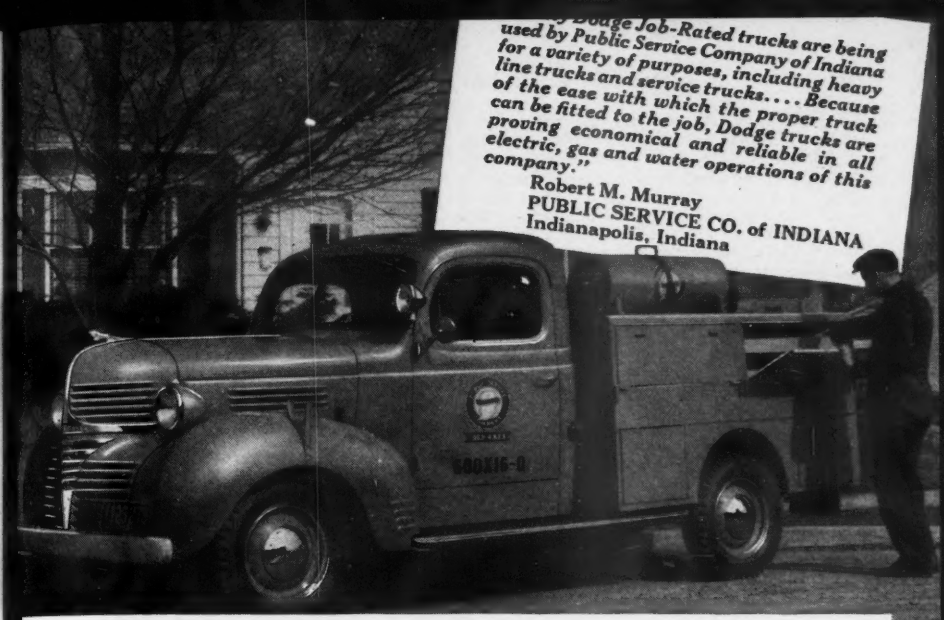
Big Turbines at Santee-Cooper

INSTALLATION of parts of the giant turbines in the power house of the Santee-Cooper project has already begun, according to R. M. Cooper, general manager of the South Carolina public service authority.

The enormous speed rings of the turbines are now being put in place. These rings are cast in five parts. Each part of a ring weighs 30,000 pounds and requires an entire railroad car for delivery.

Other imbedded parts of the turbines have been put in place.

The Santee-Cooper powerhouse, near Pinop-



STEP INTO THE MONEY SAVING CLASS

WITH

DODGE *Job-Rated* TRUCKS

LOOK! COMPARE DODGE WITH THESE "OTHER TWO" LOW-PRICED TRUCKS.
DODGE OFFERS FAR WIDER SELECTION

COMPARISON	DODGE TRUCKS	OTHER TWO TRUCKS	
		TRUCK A	TRUCK B
Number of ENGINES	6	1	3
Number of WHEELBASES	17	9	6
Number of GEAR RATIOS	16	6	9
Number of CAPACITIES	6 ½ to 3-Ton	3 ½ to 1½-Ton	4 ½ to 1½-Ton
Number of STD. CHASSIS and BODY MODELS	106	58	42
PRICES begin at	$468	$452	$475.88

Prices shown are for ½-ton chassis with flat face cowl delivered at Main Factory, federal taxes included—state and local taxes extra. Prices subject to change without notice. Figures used in the above chart are based on published data.

TRUCKS THAT FIT THE JOB—SAVE MONEY!

DODGE *JOB-RATED* TRUCKS are engineered, built and "sized" throughout for one purpose—to FIT THE JOB! And when a truck *fits the job* you can expect savings—on gas and oil, tires and upkeep. Dodge powers each Dodge Job-Rated truck with exactly the *right one* of 6 great Dodge truck engines which include the heavy-duty Dodge Diesel. Each truck has the *right* size clutch, transmission and rear axle to fit it for dependable duty on the job it is built to do. Save money! See your Dodge dealer about low delivered prices. Buy Dodge *Job-Rated* trucks that *fit YOUR job!*

Booklet FREE—READ AND SAVE
Learn how a truck to *fit the job* can save YOU money! Ask your Dodge dealer or write Dodge Division, Chrysler Corporation, Detroit, Michigan

SEE YOUR Dodge Dealer FOR A GOOD DEAL

DEPEND ON DODGE *Job-Rated* TRUCKS

½-TO-3-TON CAPACITIES · 106 STANDARD CHASSIS AND BODY MODELS ON 17 WHEELBASES · *"Job-Rated" MEANS A TRUCK THAT FITS YOUR J...*

olis, will have five turbines and room for a sixth. The two fixed blade turbines, each of 40,000 horsepower, are being built by the Newport News Shipbuilding and Drydock Company, Newport News, Va., at a cost of $551,000. Three flexible blade turbines, two of 40,000 and one of 13,500 horsepower, are under construction at Milwaukee, Wis., by Allis Chalmers Manufacturing Company. They will cost $928,000.

Payroll Preparation System Saves Handling Time

THE Form-Master System of Payroll Preparation, announced recently by The Todd Company of Rochester, New York, embodies efficiency, economy and time-saving in payroll handling. The offering of this system is made after two years of intensive testing as the result of which it has been ascertained that use of the Form-Master cuts the time of payroll preparation by an average of 50 per cent.

Utilizing specially designed forms and a simple mechanical device, the Form-Master permits posting of either top-stub or end-stub checks, earnings records and payroll sheets in a single manual operation which any clerk can perform. From the point of view of most employers, an outstanding feature of the system is that it does away with the expense of special payroll machines and operators.

The Form-Master, pictured here, holds three forms in accurate alignment and makes use of a double roll of one-time carbon, which moves automatically between the three forms to assure clear impressions on all copies. The only additional instrument required is a hard pencil.

Use of the Form-Master permits the simplest possible recording of complete payroll records, including computation of earnings and all deductions necessary for Social Security and other government reports. Actual operating tests conducted over a two-year period under various payroll conditions in concerns employing from 15 to 1300 employees, show time-savings over the systems previously used of from 40 to 60 per cent. The entries are made at the rate of from 100 to 160 checks per hour and all danger of errors through transposition of figures is eliminated.

Pipe Business Improves

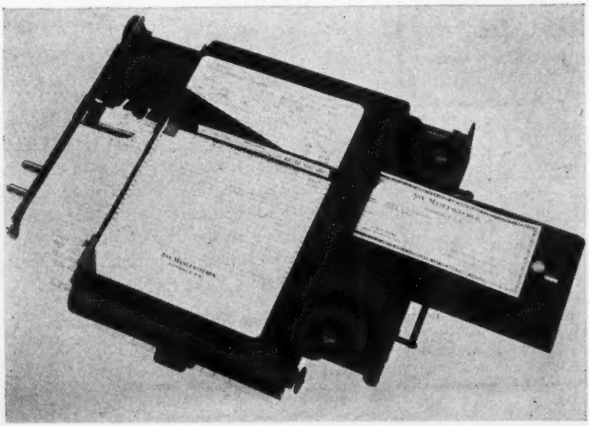
INCOMING business of cast iron pipe companies, as reflected in orders received by some of the larger manufacturers, such as U. S. Pipe & Foundry Co. and Warren Foundry & Pipe Corp. currently are showing moderate improvement over a month or two ago. Both companies, according to recent reports, entered the second half year with the prospects for deliveries a little better than in the second quarter.

Prospects for the cast iron pipe companies are brightened to an extent by plans for industrial plant expansion in connection with national defense work and by the currently more active market for residential housing in certain areas. Municipalities will have to lay additional pressure pipe if either of these movements assumes really large proportions, and the currently higher order rate may be an early reflection of this trend.

Utility Hastens Production

TO meet requirements of the national defense program, the United Gas Improvement Co. is reported to be planning to hasten production of chemical products developed by its research division.

The company completed a plant at Chester, Pa. last Spring for the purpose of exploiting processes for refining water gas tars and light oil constituents, but the plants were not scheduled for extensive production until next year. However, the proposed manufacture of artificial rubber on a large scale and of other materials of vital use in the national defense program has caused revision of the plans.



Device simplifies payroll handling and eliminates all danger of errors through transposition of figures.

New Appointments

Pittsburgh Reflector

MR. E. W. Simons, president, Pittsburgh Reflector Company, announces the appointment of Charles H. Goddard, New York branch manager since 1932, as general sales manager. Mr. Goddard will continue to make his headquarters at 1775 Broadway, New York City, but will spend the greater part of his time in the various sales territories throughout the United States and Canada, and at the home office in Pittsburgh.

Mr. Goddard has been identified with the lighting industry for many years. He joined Pittsburgh Reflector Company in 1931 as illuminating engineer and one year later was made New York branch manager. He has served on numerous committees in the Illumination Engineering Society and is chairman of the Lighting Fixture Manufacturers' Committee of the Electric and Gas Association of New York. He enjoys a wide acquaintanceship in the lighting industry nationally as well as in the metropolitan area of New York.

Equipment Literature

Air Cooled Transformers

A 12 PAGE illustrated booklet (B-2254) describing the Type ASL air cooled transformers for 60 cycle service in the 13,200 volt class and below and in ratings up to 500 kva for single phase operation and 1000 kva for three phase operation has been published by the Westinghouse Electric & Manufacturing Company.

The first booklet on the subject made available by any transformer manufacturer, it includes a complete description of the transformer along with its advantages over the conventional liquid-filled types. In addition, several actual installation photographs illustrate the neatness and advantages realized by such applications. A comparison of the electrical characteristics and weights and dimensions of the Type ASL conventional liquid-filled transformers completes the leaflet.

G-E Publications

RECENTLY published bulletins describing new and improved G-E products include the following: Sure-Grip Fuse Tongs, GEA-3030; Reclosing Relays, GEA-3383; Sodium Lighting Goes to Town, GEA-3392; How to Terminate Tellurium Parkway, Shielded, Single-Conductor Cable, GEA-3361; How to Terminate Braided, Shielded, Single-Conductor Cable, GEA-3362; Flamenol Insulated Cable, GEA-2733D; Novalux Sports Floodlight, GEA-3317, and G-E metal-clad switch gear with Drawout Potential Transformers, GEA-3400.

Developments in Lighting Vehicular Tunnels, GEA-3411. (Reprint of an article by R. M. Swetland in General Electric Review).

Instruments in Industry, GEA-2247. (This publication, issued by the Meter Division, is devoted to extending the benefits of electric instruments).

Metal Spraying

THE first issue of "Metco News"—a periodical devoted entirely to the latest developments and applications of the metal spraying process—has been issued by Metallizing Engineering Co., Inc., manufacturers of Metco Metallizing Equipment.

All those actively engaged in the maintenance, salvaging or manufacture of metal products or equipment may receive this and ensuing issues, without cost, by writing to the publishers at 21-07 41st Avenue, Long Island City, New York.

Multiple-retort Stoker

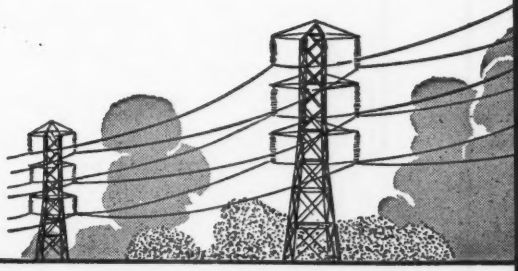
A NEW catalog, No. MR-4, giving details of the most recent design of C-E multiple-retort stoker, type MRO, is being distributed by Combustion Engineering Company, Inc., 200 Madison Avenue, New York. The sixteen attractive 8½ x 11-in. pages describe the engineering background, operation and principal features of the stoker, and contain 31 illustrations comprising photographs, cutaway sections, diagrams and drawings of typical installations.

Pump Materials

THE effect of water conditions on the selection of pump materials is dealt with in a bulletin (R-6108) issued by The Allis-Chalmers Mfg. Company's Feedwater department, Milwaukee, Wisconsin.

The necessity of carefully investigating the type of water to be pumped is pointed out and a number of factors in water that affect performance and service are considered. The effect of these various factors on different pump materials with particular references to the influence of pH value is discussed. The information required to select intelligently the proper materials for pumps is outlined and a chart is included showing the proper materials recommended for various pH ranges.

Transmission line construction costs can be materially reduced and completion expedited by using Hoosier Crews



HOOSIER ENGINEERING COMPANY

CHICAGO — 46 SO. 5TH ST., COLUMBUS, OHIO — NEW YORK

Canadian Hoosier Engineering Company, Ltd.
Montreal

ERECTORS OF TRANSMISSION LINES

TRIDENT

Because — Trident Meters mean an efficient economical Water Depa
Efficient Trident operation insures accuracy at all rates of flow, many
of service at least expense. The Trident-Metered customer pays only h
share of water expenses. Charge for water is equably distributed ove
gallonage actually used. Unregistered water cost and high maintenanc
not be made up for by higher water rates.

E CUSTOMER

SATISFIES

Because — Trident Water Meters minimize operating cost, improve op
results. Interchangeability of construction makes possible extremely l
ventory for replacement parts . . . no obsolete parts carried for old mod
new parts fit all models. Depreciation and maintenance virtually elim
for improved interchangeable parts make even forty-year-old Trident
as when new — or better!

E SUPERINTENDENT

THEM

Because — Trident simplicity, combined with the perfect fitting of unit r
ment parts, saves maintenance men time in repairing these meters. Triden
changeability of unit parts saves the trouble of searching for the right p
any particular model. The result is, better testing meters, at lower maint
cost, both for labor and materials.

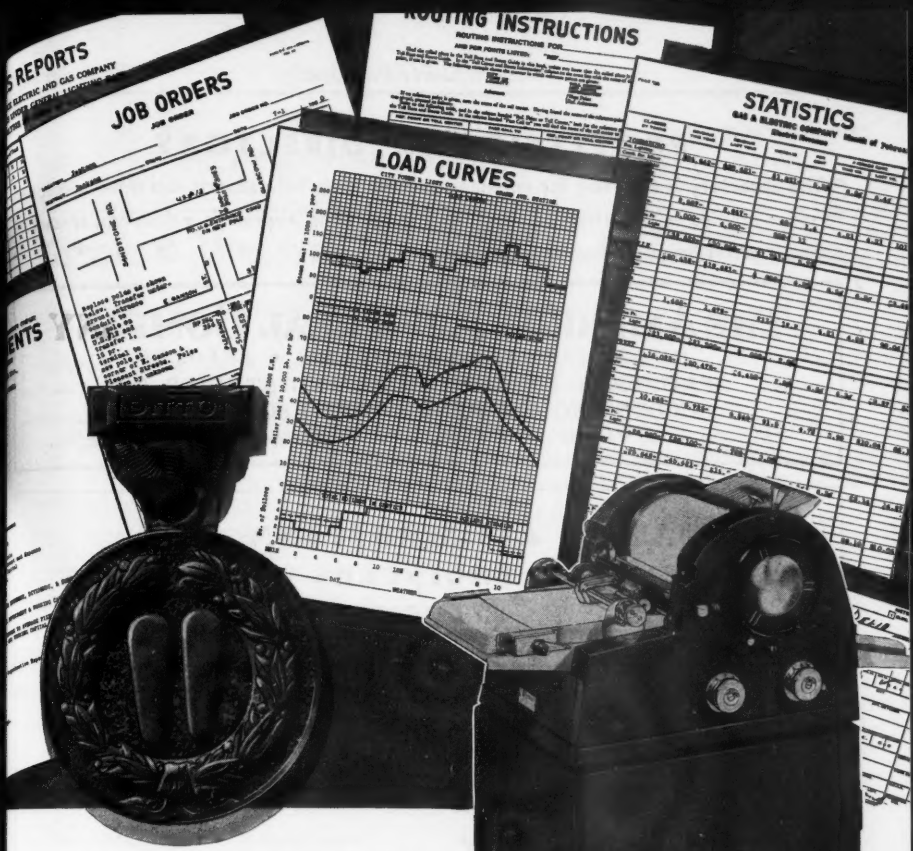
HE MAINTENANCE MAN

ALL!

Because — The Comptroller is interested in seeing that Water Departme
are cut and income is increased . . . in making this department *not* a
on the taxpayer, its rates reasonable, the market for water bonds strong.
Water Meters through maintained accuracy, develop maximum water r
Interchangeability of parts cuts depreciation, and frees capital otherwi
up in spare parts for old models.

HE COMPTROLLER

NEPTUNE METER COMPANY • 50 West 50th Street, NEW YORK CITY
Branch Offices in CHICAGO, SAN FRANCISCO, PORTLAND, ORE., DENVER,
DALLAS, KANSAS CITY, LOUISVILLE, ATLANTA, BOSTON



Pin a Speed Medal on your report operations

WITH THE NEW

Ditto D-44

me utility men take nearly as long to *produce copies* eir reports as it took to gather that data. Others have overed Ditto. When *you also* know the new Ditto D-44, ll find that it is useful to everybody, every day, every , on practically every routine operation.

ithout type, stencil or ink it makes 300 and more ht copies of anything written, typed or drawn . . . schedules; operating and progress reports; specifica-; engineering drawings; service, factory and work ts; forms, and the like . . . 70 copies a minute, in one ur colors at once, 6c for the first 100, 3c thereafter. inals can be used repetitively—excellent for cumu-e reports.

ake your department more effective—get the whole of Ditto's public utility performance on gelatin or d duplicators. Use coupon for free idea-booklet, ies, Their Place in Business." No obligation!

DITTO, INC.
2216 W. Harrison St., Chicago, Ill.

Gentlemen:
Send me copy of your book, "Copies, Their Place Business." No obligation.

Name.....

Position.....

Company.....

Address.....

City.....*State*.....

PROFESSIONAL DIRECTORY

• This Directory is reserved for engineers, accountants, rate experts and others equipped to serve utilities in all matters relating to rate questions, appraisals, valuations, special reports, investigations, design and construction.

PROFESSIONAL DIRECTORY (*continued*)

INDEX TO ADVERTISERS

[The Fortnightly lists below the advertisers in this issue for ready reference. Their products and services cover a wide range of utility needs.]

*Fortnightly advertisers not in this issue.

1940

57
57
16

32
21

56
38
27

30
48
m-
49

41
27

54
45
9
51
46
23
29

56
52
56
Cover
57
18
57
36

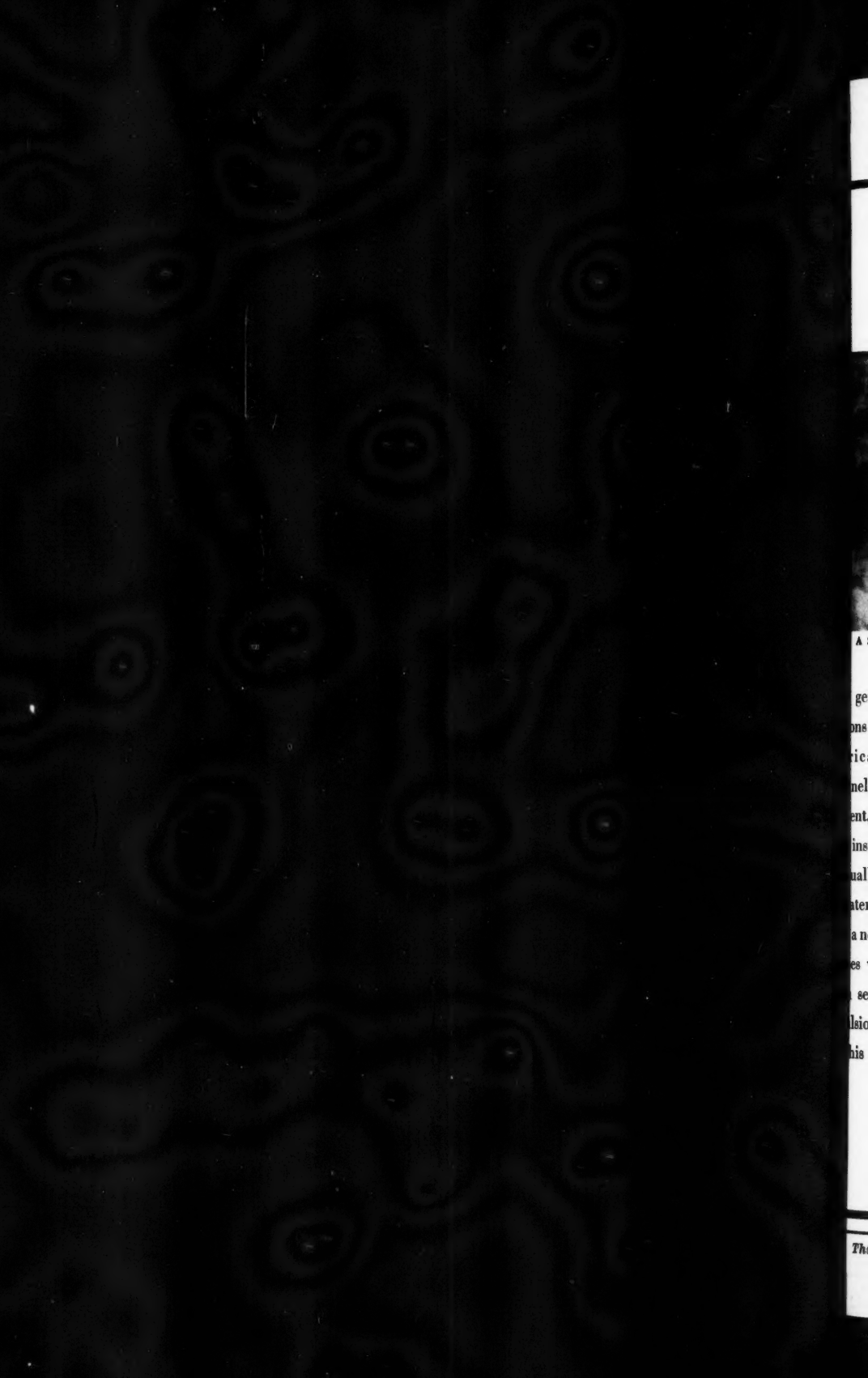
11

19
26
57

A ST

In gen
stations .
lubrica t
Grinnell
manent, p
The insta
manually
of water s
into a non
flames wi
soon sepa
emulsion
This si

This p



—GRINNELL MULSIFYRE—

Snuffs Out Oil Fires with Mulslifying Spray of Water!

A STUBBORN OIL FIRE . . . WHAT MULSIFYRE SPRAY LOOKS LIKE . . . FIRE OUT, WITHIN 5 SECONDS!

generating plants, switch yards, sub-ons . . . wherever oil-filled apparatus or ricating systems are employed . . . nell Mulsifyre Systems now give per-ent, positive protection against oil fires. instant the system is turned on, either ually or automatically, a driving spray ter strikes the oil . . . churns the surface a non-flammable emulsion . . . smothers es within a few seconds! The water separates itself from the oil as the lsion breaks down.

his simple, positive method of extinguishing oil fires was developed and patented by Grinnell . . . and is incorporated in Mulsifyre Systems by means of a special discharge nozzle, the Grinnell Projector. Since its introduction, "Mulsifyre" has been accepted internationally by utilities and industries . . . and by the U. S. Navy for bilge-protection of oil-burning ships.

Write for detailed information on "Mulsifyre" Systems and their applications. Grinnell Company, Inc., Executive Offices, Providence, Rhode Island. Branch offices in principal cities of U. S. and Canada.

GRINNELL

AUTOMATIC SPRINKLER FIRE PROTECTION

Re-stocking is Vital!

As every fisherman knows, even if he has a new tapered line and a colorful royal coachman, his success depends on a wise conservation policy. Where there's too much "take out" and not enough "put in," the sport is poor for everyone.

THE far-seeing executive knows that this same principle applies in his business.

If he pursues the policy of buying on price alone, he contributes little to the progress of his industry. But by purchasing from those manufacturers who lead in research, he encourages the continual development of new and better products—a "conservation" policy that provides for the future.

Because many of you have adopted this broader purchasing policy, General Electric, through its research program, has earned for the electrical industry tens of dollars for every one that it has earned for itself.

In your own interest buy where you are assured of a continuing return. Your purchases will show that you foster a "put-in" policy for the industry—because re-stocking is vital.

GENERAL ELECTRIC